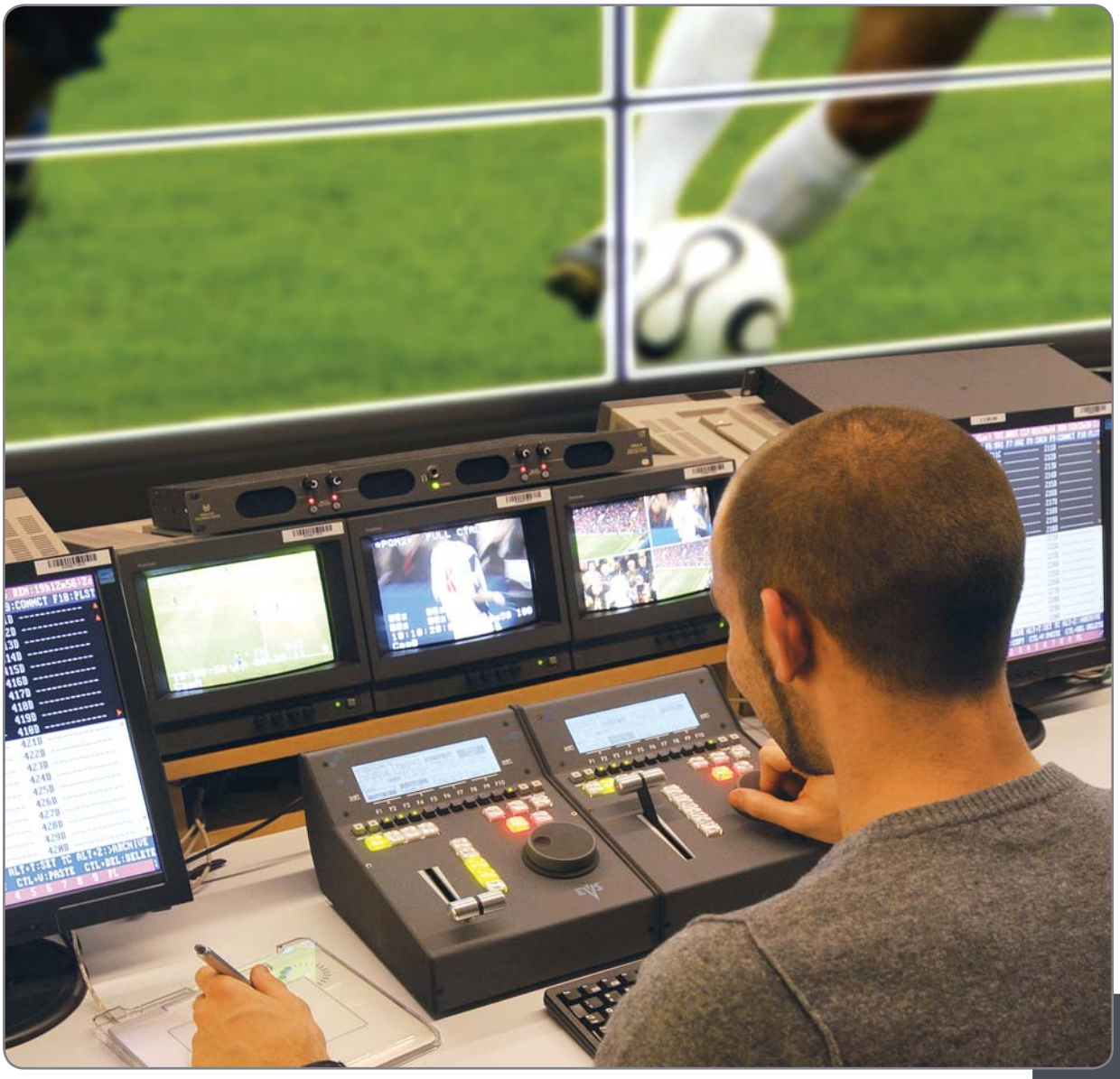
Operating Manual

Version 11.01 - April 2012

Multicam·LSM



Live Slow Motion & Super Slow Motion

Instant Replay & Highlights Production

EVS

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Regional Contacts

The address and phone number of the EVS headquarters are usually mentioned in the **Help > About** menu in the user interface.

You will find the full list of addresses and phone numbers of local offices at the following page on the EVS website: http://www.evs.tv/contacts

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What's New?

The changes linked to new features on Multicam version 11.01 are listed in the table below, and are identified in the user manual by the 'New' logo in the margin

Updates for Multicam - Version 11.01	
Section 2.6	This section decribes the new "keyboard locking" feature for the remote controller.
Section 18.5	The Hypermotion chapter includes new supported Hypermotion cameras (NAC Camera Hi-Motion II and For-A VFC-7000 Camera).

Overview

The aim of this manual is to familiarize the operator with the Multicam software for EVS High Definition and Standard Definition servers, and its Remote Panel, so as to learn as quickly and efficiently as possible the basic operations.

The CLIP & PLAYLIST MANAGEMENT functions allow the operator to keep up to 5400 clips on a server and of course to replay all or some of them. A playlist consists of a list of clips (90 playlists can be defined) with video and audio transitions.

The XNet option networks XNet servers and other machines into a fully integrated production environment. Any clip recorded by any server on the network is available instantly for editing and/or play-out to any other operator.

The SPLITSCREEN (horizontal, vertical or mix) option displays simultaneously two synchronized actions side by side on the main program output.

The PAINT option (Telestrator) draws and applies keying on the recorded pictures. Sport actions can be analyzed using different coloured circles, arrows and lines.

The TARGET TRACK option follows a target with a highlighted circle, box or ellipse, and can zoom in the selected portion of the recorded pictures.

The OFFSIDE LINE option allows you to draw the offside line or area on the screen by shading a portion of the pitch.

1. Initial Configuration

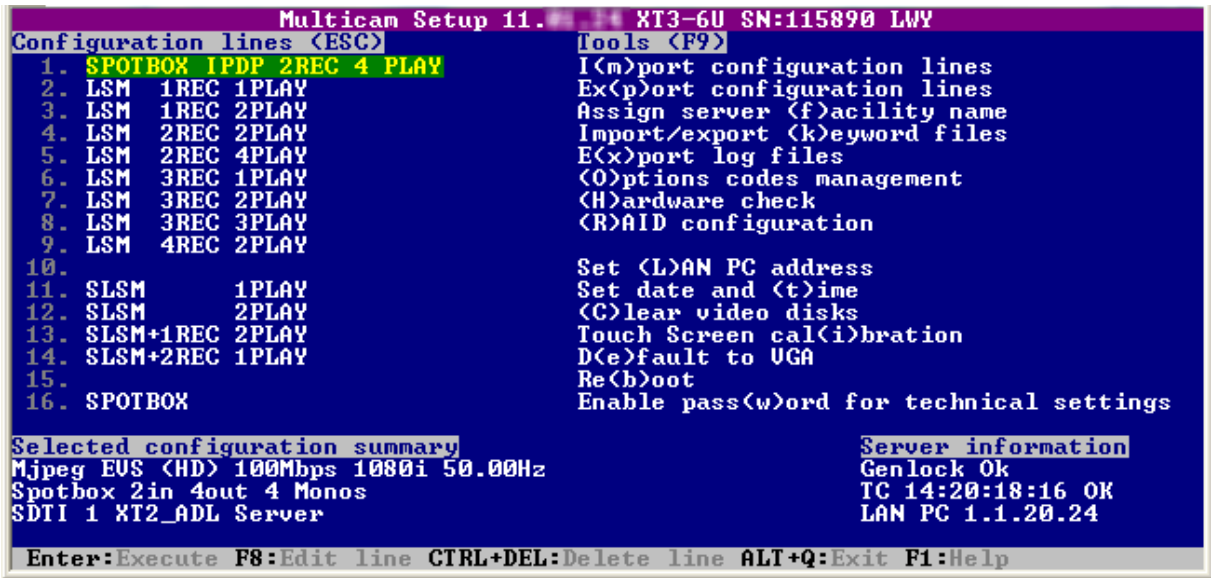
1.1 Application Selection

The Multicam Setup and Configuration modules are used for configuration and maintenance operations. They are also used to select which application configuration to run, since EVS disk recorders have the ability to run various configurations. In the associated Multicam Setup and Configuration windows, you can also specify the channel configuration you want to use and several audio and video parameters.

When turning on the EVS mainframe, the first step is the PC boot sequence, then the Multicam Setup window is displayed:

- If a default application has been previously selected, this application will start automatically after a few seconds if no key is hit.
- If a default application hasn't been defined or if the space bar is hit, the system will remain in the Multicam Setup window and wait for the operator's next command.

You will find complete information about the Multicam Setup and Configuration windows in the EVS Server Configuration manuals.



1.2 Configuration on LSM Remote

Before you start using the Multicam application in Multicam LSM mode, you need to ensure that the parameters are properly defined in the **Setup** menu of the Remote Panel, and in the **Setup Configuration** module of the **Multicam** application. The new parameters are saved as soon as they are modified.

Important

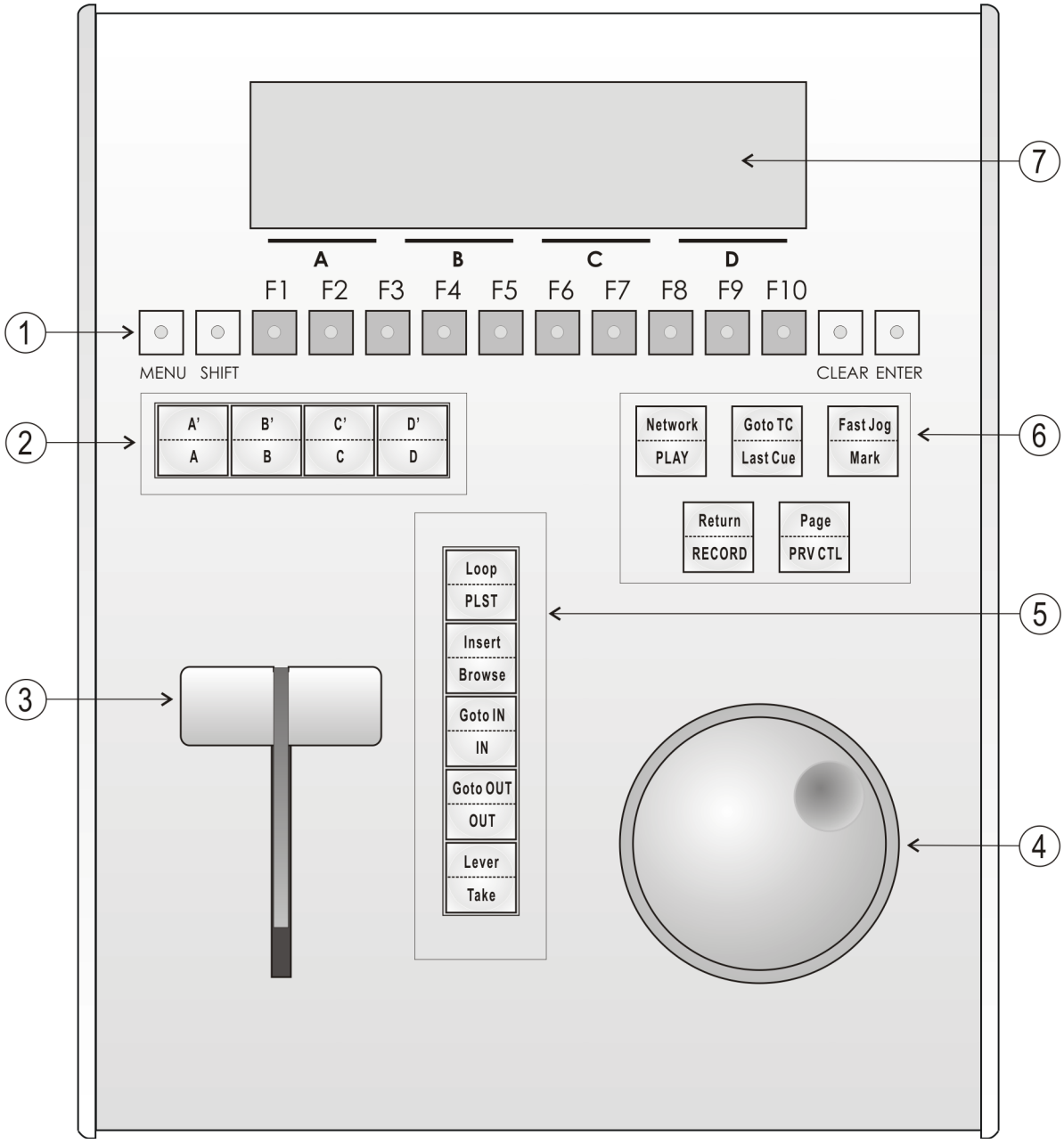
Prior to using Multicam, the operator should enter the Setup menu and set all necessary parameters. If clips are stored with certain parameters and the operator wishes to change them afterwards, those clips and playlists will not change. It is thus important to set these parameters first.

The Multicam Configuration manual includes a detailed description of all settings which can be defined on the Remote Panel.

2. Remote Controller

2.1 General Layout

The following diagram shows the Remote Panel along with a brief description of each area.



Note

The operational buttons have primary and seconday functions and are divided into upper and lower sections. By pressing the **SHIFT** button, you gain access to the secondary functions.

1.	F-keys & small buttons	Multi-purpose keys
2.	Soft keys	With LCD display, allows the operator to enter the Multicam MENU system
3.	Lever	Initiates slow motion and playlist replay
4.	Jog dial	Used to accurately cue disk recorder
5.	Operational block 1	

PLST	Initiates active playlist
LOOP	Records the main output (PGM1) to the first input (CAM A) of Multicam.
BROWSE	Used to browse through clips, playlists, cue points
INSERT	Used in playlist management to insert clips into a playlist
IN	Sets Mark IN at the current position
GOTO IN	Goes to the defined Mark IN
OUT	Sets Mark OUT at the current position
GOTO OUT	Goes to the defined Mark OUT
TAKE	In PGM+PRV mode, pressing this button swaps cameras on PGM and PRV monitors In Multi-PGM mode, pressing this button toggles between CAM selection and PGM selection modes. In 2 PGM mode, when both PGMs are selected on the Remote Panel, pressing this button swaps the content loaded on PGM1 with the one loaded on PGM2 and vice-versa. In Playlist Edit mode, pressing this button inserts the clip loaded on the PRV channel into current playlist.
LEVER	Changes the lever range to secondary mode (see setup menu for range selection)

6. Operational Block 2

PLAY	Initiates playback
NETWORK	Enters the XNet menu. (connects to other servers on the network)
LAST CUE	Re-cues EVS server to previous cue point
GOTO TC	Allows timecode entry, with «F» keys
FAST JOG	Used with jog dial for rapid, manual re-cue. This mode is automatically reset after PLAY/LIVE commands.
MARK	Used to enter re-usable cue points (256 cycling cues).
RECORD	Initiates “E2E” mode
RETURN	Inside a clip, allows the operator to return to the same picture inside the record train, if it still exists.
PRV CTL	Enables/disables the Preview Control mode.
PAGE	Selects current clip page, from 1 to 10.

7. LCD Display — Provides current status of system

2.2 Led Colours

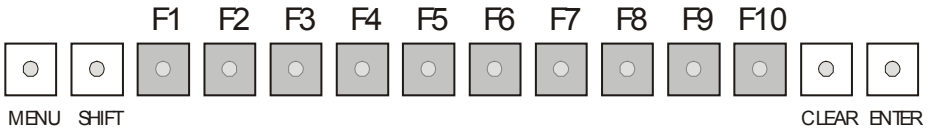
A selected key lights red.

When a key lights green, it means a value in relation with this key exists.

For example: **F1** to **F0** keys

- Green light means a clip has been stored in relation with the key.
- Green flashing light means a clip is being created.
- Red light means the clip associated to the key is playing or is ready to play.
- Red flashing light means a clip is being deleted (in network mode).

2.3 F-keys & Small Buttons

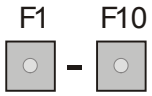


Provides access to the Secondary Menu. Also used as **CANCEL** in some messages when confirmation is required.

Note: SHIFT+MENU returns to Main menu

Enables use of the secondary key functions.

Note: This key remains active even if released, until another key has been hit.



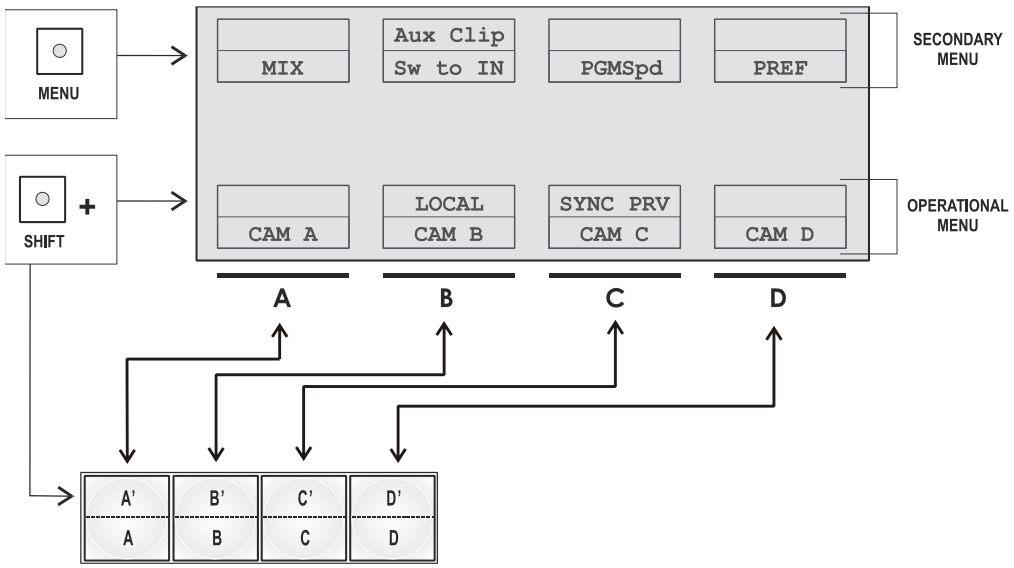
Stores or recalls clips, recalls playlists and enters timecode information.

Is a multi-purpose key used to clear clips or playlists, and to clear IN/OUT points.

Is used to append clips at the end of the current playlist, and to validate other options and messages.

2.4 Soft Keys

The soft keys have primary and secondary functions and are divided into upper and lower sections.



The LCD display is divided into two menus.

- To access the secondary functions in the operational menu (**A'** to **D'**), press the **SHIFT** button.
- To access the secondary menu, press **MENU** from the remote controller. The

secondary menu is used to define settings that do not require regular changes, without having to return to the Setup menu.

- To return to the operational menu, press the **MENU** key again.
- To return to the Main menu in Multicam, press SHIFT+MENU.

2.5 Transport Controls

2.5.1 Jog Dial

The jog dial allows the operator to pass into Search mode and thus to choose exactly the Short OUT or Short IN image. Move the jog dial clockwise to search forward and move it counter-clockwise to search backwards. One revolution of the jog dial will produce a jump of approximately 35 frames. This number can be multiplied by enabling the Fast mode. The multiplication factor is defined in the **Setup** menu.

Note

The jog dial is also used to do the following:

- set parameters in the **Setup** menu. Refer to the 'Setup Menu' section for more information.
- browse inside the clips database, the cue points or the current playlist. Refer to the explanation of the BROWSE function for more details.

The jog dial is active at all times when the system is in Play & Record modes.

2.5.2 Lever

The lever is used to start a play or to modify slow motion speed. Its run can be of two different types depending on the lever mode. In this mode, the lever run goes from 0 up to 100%.

Different ranges are available to play material from –400% to 400% using the **Second lever range** parameter in the **Operational Setup** menu (p.9.1 F5).

To access this second speed range, press SHIFT+LEVER from the remote controller.

Note

When SD SUPER MOTION material is loaded on the primary channel, the lever range has a larger, flat step at 33%.

With HD SUPER MOTION, the step is at 33% or 50% depending on the camera.

The lever is also used to adjust speed, effects type and duration in Playlist Edit mode.

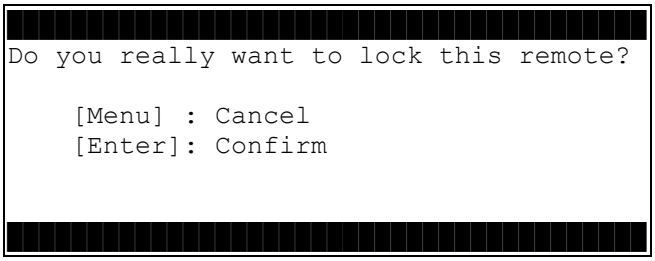
2.6 Keyboard Locking

You can lock a remote keyboard at any time to protect it against accidental changes, for example to prevent interruption of a play operation on an unattended device. Only the locked device is affected, other remotes will stay fully operational.

2.6.1 Locking a Remote

To lock a remote, press the **CLEAR** key. Then, within 2 seconds, press the **MENU** key on the keyboard.

The following confirmation message is displayed:

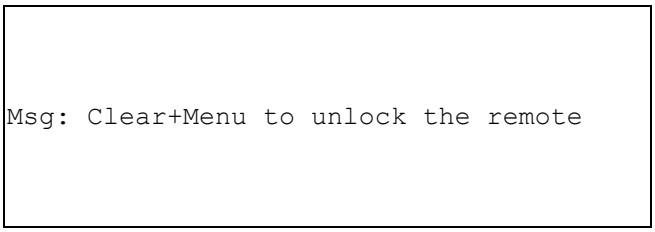


Press the **Enter** key to confirm the locking of the remote.

When a remote is locked:

- The **CLEAR** and **MENU** keys, used for unlocking, are flashing green.
- All other keys are continuously lighting red.
- The jog brake is activated.
- All keys, the lever and the jog beep if pressed or operated, except the **CLEAR** and **MENU** keys, used for unlocking.

In addition, the following message is displayed in the middle of the current screen:



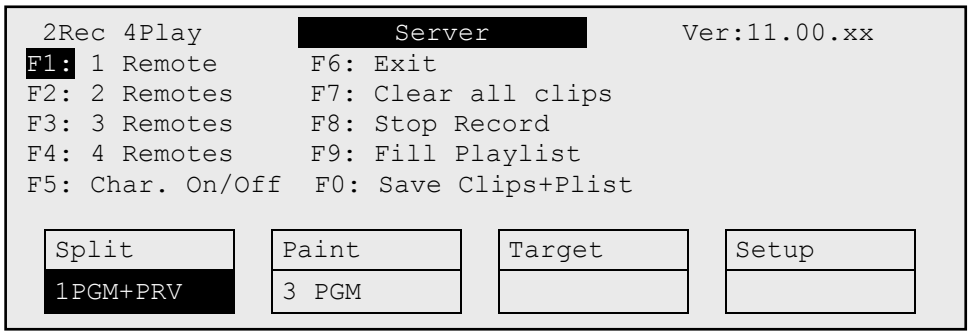
2.6.2 Unlocking a Remote

To unlock the remote, press again the **CLEAR** key then, within 2 seconds, the **MENU** key. The remote goes back to its operating mode.

3. Main Menu

Introduction

After the boot sequence of the Multicam system, the LCD screen of the Remote Control panel will display the Main menu:



The Main menu has special function key operations as shown above, as well as the “soft” keys options to enter 1PGM, 1PGM+PRV, 2PGM, or 3PGM modes (if available) and to enter the **Setup** menu to configure your remote controller or to add special functions to your application.

Note

If 2 channels are available for the 1st Remote, the B key will display **2 PGM**. If 3 channels are available, the B key will display **3 PGM**.

How to Return to the Main Menu

From any section of the application, except Playlist mode, press SHIFT+MENU on the first Remote Control panel to return to the main menu.

Function Keys in the Main Menu

Select the corresponding Function key (**F_** key), and then press **ENTER** to validate the selection.

Function Key	Use
F1 to F4	If desired, the Multicam system can be run using 1, 2, 3 or 4 EVS Remote Panels. Depending on the number of play channels available in the current configuration, 1-, 2-, 3- or 4-Remote modes will be available from the main menu.
F1: 1 Remote	One Remote Panel is used in the configuration
F2: 2 Remotes	Two Remote Panels are used in the configuration. If 4 play channels are available, when selecting the 2 Remotes mode, the operator can choose between two configurations: • **2 play channels for each remote**: In this configuration, each Remote Panel can select PGM+PRV or 2PGM mode. Each Remote Panel can manage video transitions (cut, mix, wipe) in PGM+PRV and playlist modes. • **3 play channels for the 1st remote and 1 play channel for the second remote.** In this configuration, the 1st remote can select PGM+PRV or 3PGM mode and can manage video transitions. The 2nd remote is forced to 1PGM mode and can only handle cut transitions.
F3: 3 Remotes	Three Remote Panels are used in the configuration.
F4: 4 Remotes	Four Remote Panels are used in the configuration.
F5: Char. On/Off	Enables or disables the on-screen display (Timecode, Clip ID…) on the output monitors.
F6: Exit	Exits the Multicam software and returns to the EVS Menu.
F7: Clear all clips	Clears all clips. All clips will be lost. A confirmation of this command is required. For more information to this action, refer to the section 9.2.6 ‘Clearing Clips’, on page 42. **Note:** This command is not similar to the **Clear Video Disks** from the **Maintenance** menu. If you wish to refresh completely the server, i.e. to clear all clips including the protected ones, you need to use **Clear Video Disks** rather than **Clear all clips**.
F8: Stop Record	Stops the record. The **REC** key will go off and the **F8** function key is now used to restart the record.

F9: Fill Playlist	«Dump» feature which allows all clips to be «dumped» at the end of the current playlist. This allows the operator to save all material to tape, as a backup feature after a show is complete. You can select in the **Setup** menu which camera angles have to be included in the Fill Playlist function. If your clips are currently connected to another server on the network, the clips from that server will be added to your current playlist. Make sure that the playlist you have selected is an empty one. This function will append the clips at the end of an existing playlist.
F0: Technical setup	Gives access to the technical setup menu.

Important

In order to guarantee the validity of data and clips previously saved, it is advised to properly exit the application by pressing **ALT**+**Q** and **ENTER** from the keyboard, or **F6** and then **ENTER** from the Remote Panel. **DO NOT TURN OFF THE SYSTEM WHILE THE APPLICATION IS RUNNING.**

4. Remote Panel Operations

4.1 Operations

4.1.1 RECORD

This key lights red when the system is recording. Pressing this key brings the system in E/E (“live”) mode, and starts the record if necessary (depending on the settings of the **Setup** menu). The E/E mode is actually playing pictures already recorded by the system, and has a delay of 3 frames compared to the live source, on all audio and video tracks.

4.1.2 MARK

This function marks up to 256 cues that can be marked while recording or playing. The cues are marked on the LIVE or PLAYBACK program depending on the value set in the **Setup** menu. When the operator has marked 256 cues, the next one will overwrite the oldest one.

4.1.3 LAST CUE

This function re-cues the EVS server to previous cue point relative to the current timecode position. Each time the Last Cue button is pressed, the EVS server re-cues to the previous cue, etc. When recalling a cue point, the cue number appears in the upper left corner of the OSD if this option is enabled with the **Cue number on OSD** parameter in the **Operational Setup** menu (p.1.1 F1)

4.1.4 PLAY

This function initiates a forward motion. It can also be used to start playback of playlists and clips (refer to PLST command).

When **PgmSpd/Var Max** is OFF, the default playback speed when pressing the **PLAY** key is 100% for standard pictures, 33% for Super Motion pictures with a Triple Speed camera (SD), and 50% for Super Motion pictures with a Double Speed camera (HD),.

When **PgmSpd/Var Max** is ON, the value defined in the **Operational Setup** menu for the **PGM Speed/Var max** parameter (p.9.1 F3) is used.

4.1.5 IN

This function defines the IN point of a clip. The key will light differently depending on the following situations:

Green key	The key lights green if an IN point exists but is not the image you see.
Red key	The key lights red if the on-air image is at this IN point. This point can

be entered while recording.

Flashing (green or red) key	In Split Audio mode, this key can be flashing green or flashing red. Refer to the section 11.16 'Split Audio', on page 118 for more details. During a Replace operation on a playlist, this key will flash red if trying to insert an IN marker on a transition, as this is not allowed. During an Extend operation on a timeline, this key will flash red until you jog. At that time, it will flash green until the operation is confirmed using the CAM D key.

4.1.6 OUT

This function defines the OUT point of a clip. This operates similarly to the **IN** button.

Note

The OUT point (field) is always excluded. When playing a clip, it will freeze on the field preceding the OUT point marked by the operator.

Modification of Clip IN / OUT Points

Select the clip that you wish to modify, use the jog dial to position the material at the new IN or OUT point, and re-mark the IN or OUT point(s) as required.

Important

When IN/OUT points are set and a clip is saved, the system automatically write-protects a user definable length of material before and after the IN/OUT points respectively. These are referred to as the guardbands. Their duration can be set with the **Default clip duration** parameter in the **Operational Setup** menu (p.2.2 F2) as required.

The duration of the guardband after the OUT point can be reduced according to the quantity of video/audio material available when saving the clip.

4.1.7 JOG KNOB

This function is used to accurately cue material.

4.1.8 FAST JOG

When selected, this option enables fast picture search: the actual speed of this fast jog is adjustable in the **Setup** menu. Starting a play or returning to E2E mode resets the Fast Jog mode.

Important

The jog dial is active at all times when the system is in play & record. The brake is automatically turned on when starting a playback with the **PLAY** key or with the lever, or when returning to E2E mode with the **RECORD** button.

4.1.9 LEVER

This function is used to perform slow motion from 0 to 100% and to playback material from 100 to + 100% or from 200 to + 200% when Secondary Lever range is selected. The lever has a continuous, linear range, except when Super Motion material is loaded on the primary channel. In this case, there is a “flat step” at 33% (SD Super Motion) or 50% (HD Super Motion) to help the operator locating easily the ideal playback speed.

Important

When playing Super Motion material in slow motion, to obtain the smoothest replay, it is important that the replay speed is exactly the ideal slow motion speed, i.e. 33% for SD Super Motion or 50% for HD Super Motion. If the replay speed is slightly off these ideal values, movements might appear staggered. These ideal speeds can also be called directly by pressing the **PLAY** button when the current element is Super Motion. The PGM speed and Var Max modes can also be used to facilitate this. See Chapter 6 ‘PGM-PRV Mode’ on page 26 for a description on these modes.

4.1.10 PLST

This function is not active if the current playlist is empty. If the current playlist is not empty, pressing **PLST** once enters the Playlist Edit mode.

- Pressing **PLST** from the Playlist Edit mode enters the Playlist Playout mode.
- Pressing **PLST** from the Playlist Playout mode re-cues the playlist to its beginning.
- Pressing 3 times **PLST** will always cue up the playlist ready to roll.

To play back a playlist that has been cued, press the **PLAY** button and it will roll at the preset speeds.

4.1.11 BROWSE

When **a clip is loaded** on the primary channel, pressing the **BROWSE** key allows the operator to browse inside all local clips of the database by turning the jog dial.

When **a cue point exists** for the current picture on the primary channel (the **CUE** button lights red), pressing the **BROWSE** key allows the operator to browse through all existing cue points by turning the jog dial.

When the current picture on the primary channel is neither a clip nor a cue point, or if the operator is in Playlist mode, pressing the **BROWSE** key allows him to browse inside the clips of the current playlist by turning the jog dial.

4.1.12 INSERT

This function inserts a clip before or after (depending on the **Setup** menu) the current position inside the playlist.

4.1.13 ENTER

This function appends clip(s) at the end of the current playlist. This is also used to confirm saving of clips, and validate various options and messages.

4.1.14 MENU

This function allows the operator to gain access to the secondary menu.

SHIFT+MENU on the Remote gains access to the main menu.

Also used as an **ESCAPE** key to cancel some options and messages.

4.1.15 CLEAR

This function clears the IN / OUT/ playlist / CLIPS / CUE points.

Note

- To clear one CUE point, recall the desired cue point and press CLEAR+MARK key.
- To clear all cues: when current picture is not a CUE point, press CLEAR+MARK key. A message appears to confirm the command.

4.1.16 NETWORK

This function gives access to the clips and/or records trains of other machines on the network. After the selection of the machine, the way of selecting clips and camera angles is similar to clips selection on the local LSM system. Refer to the Chapter 13 ‘Operating on XNet Network’, on page 148 for more details.

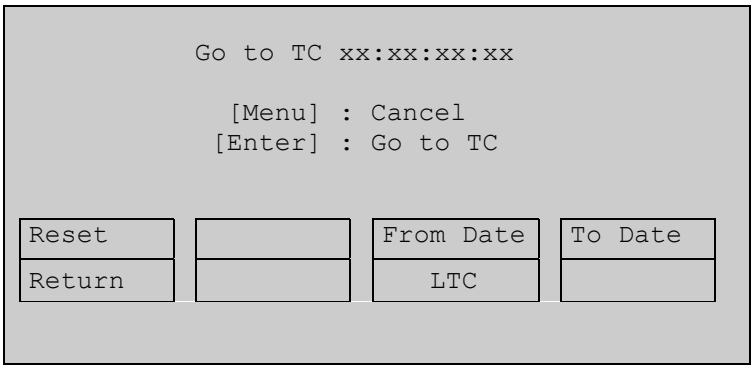
4.1.17 GOTO TC

To jump to a given timecode of the loaded train or clip, you can use the **Goto TC** option on the Remote Panel.

To go to a given timecode, proceed as follows:

1. Press SHIFT+GOTO TC key on the Remote.

   The GOTO TC window is displayed on the Remote Panel :



2. To specify a date from which the search should be executed, press SHIFT+C, enter the date in the format dd/mm/yy, using the **F1** to **F10** keys, and press **ENTER** on the Remote.
3. To specify a date up to which the search should be executed, press SHIFT+D and enter the date in the format dd/mm/yy using the **F1** to **F10** keys and press **ENTER** on the Remote.
4. To specify whether to go to a LTC, USER timecode or any of both (LTC/USER), press **C** until the requested timecode type is displayed.
5. Enter the requested timecode using the function keys **F1** to **F10**.

   Eight digits: hh:mm:ss;ff (f=frame) are displayed on the LCD screen of the Remote.

   - If you enter all 8 digits, Multicam will automatically go to the required timecode.
   - If you enter less than 8 digits (when the last digits are zeros), press ENTER on the Remote to validate the entry and reach the requested timecode.

   Once you have entered the Goto TC, you can observe it has been correctly entered on the display of the Remote LCD screen and on the output monitor. This Timecode display appears in the centre of the LCD display, just above the menu options.
6. Press **ENTER** on the Remote.

If the timecode is from the LTC table, it will be displayed in white on the output monitor.

If the timecode is from the USER TC table, it will be displayed in yellow on the output monitor.

If nothing happens after confirming the TC entry with **ENTER**, this means that the field corresponding to the selected Timecode does not exist on the disk any longer.

To exit the **GOTO TC** function at any time, press the **MENU** key.

4.1.18 GOTO IN / GOTO OUT

When you are in CLIP mode, this key combination enables the operator to go to IN / OUT points of clips, instantly.

4.1.19 LOOP

It enables the internal Loop mode. The button will flash red in this mode and “LOOP” will appear on the OSD of the output monitors. When the user selects the Loop mode, the loop has to be cabled from the HD/SD “clean” output of PGM1 to the Loop In connector.

The loop is performed on the audio and video components of the PGM1 output, or on the video only, depending on the **Internal Loop** parameter of the **Operational Setup** menu, (p.9.2 F6). In audio embedded, the audio is also looped, whatever the value defined for the **Internal Loop** parameter.

To leave the loop mode, you need to press SHIFT+LOOP again.

Note

By default, users have to connect the clean SDI output to the Loop In connector given that the OSD of the output monitors are not disabled. If users want to use the output monitor with characters out, they have to start the Multicam application with the following parameter : /LOOP_SDI_MON.

This is very useful to “consolidate” effects and edits, or adding live sound or music or voice to previously recorded material when only the video is looped back into the server.

Note

When playing back at 200% in loop mode, then replaying the looped sequence at 50%, you can obtain a “film effect”.

4.1.20 RETURN

Inside a clip, press the RETURN key to remain on the same picture, but inside the record train instead of the clip (if that picture still exists in the record train). This is useful when a clip is too tight and you want to use material beyond the current IN or OUT point.

4.1.21 PAGE

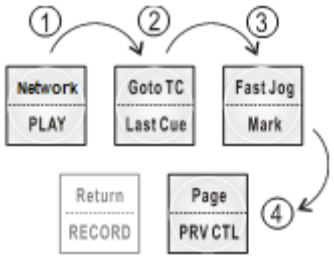
Use this key to select a new clips page. After pressing the SHIFT+PAGE key, you must press a **F_** key to select the corresponding page (1 to 10).

4.1.22 Rebooting the System from the LSM Remote

'Hard Reboot'

In the event that the system needs to be rebooted, the process can be accomplished from the Remote Panel. Keep in mind that doing this while Multicam is running will of course force the Multicam application to close abruptly, and up to 1 minute of the material being recorded and not clipped could be lost.

To reboot, press the following key sequence,



Between step 3 and step 4, the **RECORD** button will flash GREEN and the **PAGE** button will flash RED. Hitting the **PAGE** button will reboot the system. Hitting the **RECORD** button will return to normal operation.

'Soft Reboot' from the keyboard

It is also possible to run a «soft reboot» which will exit the software and return the user to the EVS Menu. Here, the software can be selected and entered again without having to reboot the entire system. When running the following procedure, the system will automatically save all recorded material (record trains, clips, playlists) upon exit.

Hit ALT+Q on the keyboard or press F6 from the main Menu, and confirm with **ENTER** or cancel with **ESC**. You will exit the Multicam software and go back to the EVS Menu.

4.2 Selection of Clip Banks and Playlists

SHIFT+F1 - F9 = CLIPS BANK

This allows access to clip banks 1 through 9 within the clip page (1 to 10).

SHIFT+F1 = BANK 1

SHIFT+F2 = BANK 2, etc. (up to bank 9)

Once in the bank, selection of the **F1 – F10** keys will call up the respective clips. If **Recall Clip Toggle** is enabled in the **Setup** menu, pressing several times on the same **F_** key will call successively all camera angles of that clip.

The clip numbering system is as follows:

Example: Clip 547 where

- "5" refers to the clip page number (1 to 10).
- "4" refers to the clip bank (1 to 9)
- "7" refers to the clip number (1 to 10) inside the bank

Note

To identify remote clips when using the XNet SDTI network, the number of the clip is followed by the number of the machine on the network. i.e. Clip 547B/04

SHIFT+F10 = playlist BANK

This combination of keys gives access to the playlists' banks. There are 10 playlists within each clip page. Selecting F1-F10 at this point calls up the corresponding playlist.

Example: Playlist 51 where

- "5" refers to the clip page
- "1" refers to the playlist number (1 to 10)

Note

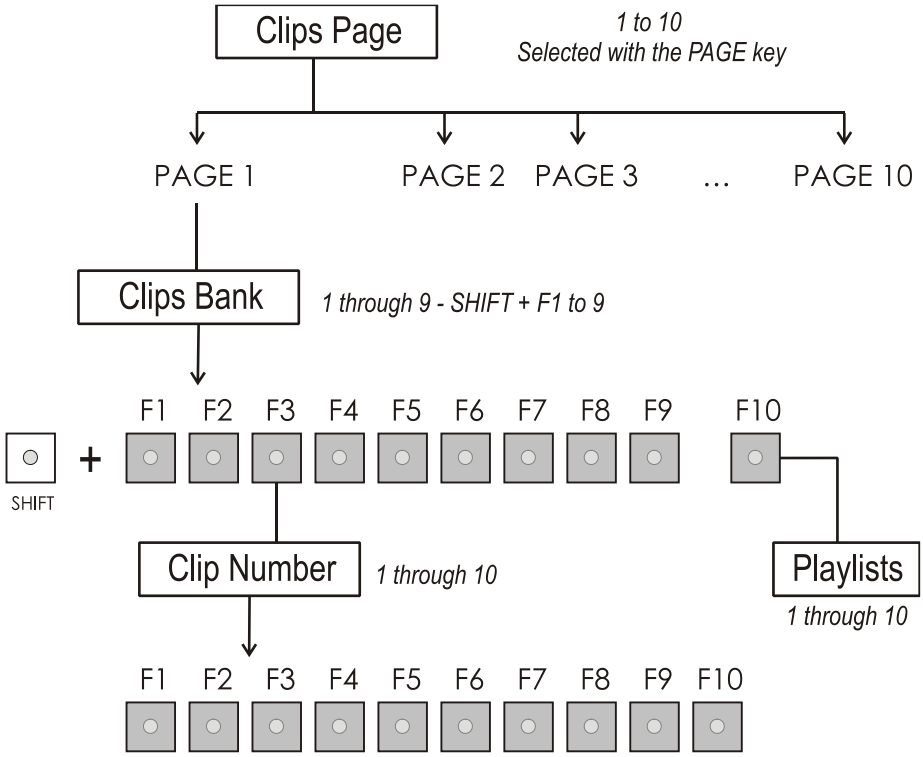
- The playlist bank of page 10 is not available from the EVS remote, since it is actually reserved for the EVS AVSP protocol (for Air Box and Air Edit).
- To identify remote playlists when using the XNet SDTI network, the number of the playlist is followed by the number of the machine on the network, i.e. Playlist 51/04

4.3 Clip Numbering Hierarchy

Multicam can store up to 900 (multiplied by the number of cameras) clips and 100 playlists in its libraries. 900 clips with up to 6 camera angles per clip result in 5400 clips on a server. This number is displayed in the upper right window of the VGA Setup screen (SHIFT+F2 from the PC keyboard).

If you are working with XNet SDTI network, keep in mind that the total number of clips on the entire network is limited to 6,000 or 16,000, depending on the network settings. This number is displayed in the same area on the VGA Setup window.

The following diagram represents the hierarchy of the Multicam clip numbering system. As an example, clip number “112” is used:



5. Control Mode

Multicam can be set in three different basic modes, depending on commands used.

5.1 Live (E2E) Mode

This mode selected at start-up can also be selected by pushing the **RECORD** key. Multicam records the input signal and plays it at the same time on the program output.

5.2 Search Mode

This mode is selected by moving the jog dial.

In this mode, the operator has the opportunity to search for an image, in order to define cue points or clips. Moving the command knob clockwise will force Multicam to search forward, moving the command knob counter-clockwise will force it to search backwards. The most important thing to note is that Multicam never stops recording while searching.

5.3 Playback Mode

Moving the lever or pressing the **PLAY** key selects this last mode.

Multicam plays the incoming signal delayed, a clip or a playlist, in slow motion and of course continues to record the incoming signal on disks.

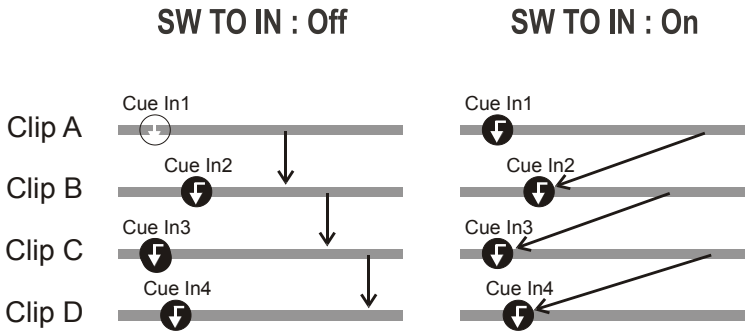
As soon as the lever is moved, Multicam starts playing back from the current picture. The playback speed is defined by the lever position. This is used to start the playback of a normal slow motion, as well as the playback of a clip or a playlist. During playback, the system never stops recording

Each operation on the Remote Panel with the command **KNOB** or **LEVER** will be associated to the Search or Playback mode respectively.

5.4 Synchronization Mode (Switch To In)

If the synchronization mode is OFF (**SW to IN** is not highlighted in the secondary menu), a request for camera change will produce a jump at the same timecode on the requested camera. This mode allows synchronous change of camera angle.

If the synchronization mode is ON, a request for a camera change (by pressing CAM A, CAM B, CAM C or CAM D in the Multicam menu) will lead to a jump to a predefined CUE IN point.



If a CUE IN point has not been previously defined, Multicam acts as in SW to IN OFF mode (even if SW to IN ON is shown) because the system has no reference to jump to.

5.5 Definition of Controlled and Primary Channels

Important

The notions of Primary Channel and Controlled Channel are very important and will be constantly referred to in this manual.

5.5.1 Controlled Channel

A channel is “controlled” when the operator can control it with the jog dial. In this case, the words “FULL CTRL” are present on the top of the OSD of the output monitor of that channel.

5.5.2 Primary Channel

The primary channel is the first controlled channel. It is identified by stars around its name on the OSD of the output monitor and on the LCD display of the Remote Panel (ex: *PGM1*).

Examples:

- In 3PGM mode, if the operator controls PGM2 and PGM3, the primary channel is PGM2.
- In PGM+PRV mode with PRV CTRL OFF, the primary channel is PGM.
- In PGM+PRV mode with PRV CTRL ON, the primary channel is PRV.

5.6 Preference Mode (PREF)

When this option is ON and a clip is recalled, the preferred camera will be displayed on the main output, even if another camera angle was previously loaded on that output.

The preferred camera is the one, which was on the primary output channel when the clip was created.

The second preferential camera ("secondary camera") is the one that was loaded on the next channel when the clip was created.

In the Clip screen, the first preferential camera is indicated by a star: 111B* and the second preferential camera is indicated by 2 dashes: 111B=.

When the preference option is disabled, the PGM output stays on the camera currently selected when the clip is called.

5.7 Secondary Controller

5.7.1 Introduction

The **2nd CTRL** function available on the Remote Panel in the main operational menu allows the operator to swap the control of one or several play channels between the EVS Remote Panel and a third-party controller.

Both controllers receive permanently the status of the channel(s), but only one controller at a time is able to actually control a channel: this is called the exclusive secondary control mode. The secondary controllers are defined in the **Operational Setup** menu of the remote (p.2.2).

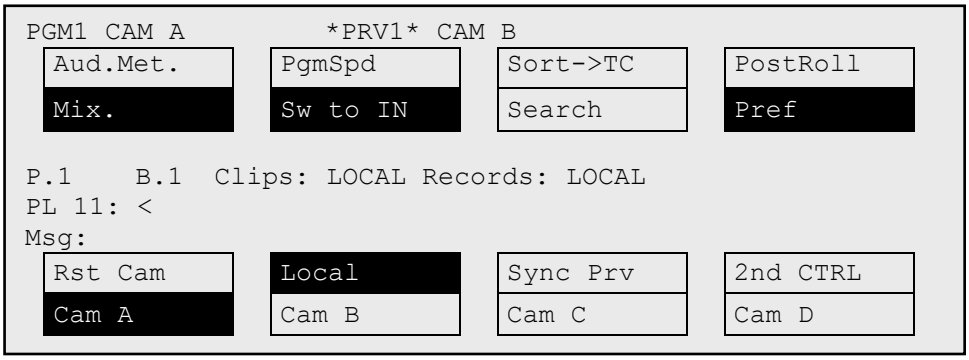
5.7.2 Interactions between IPDP and Multicam

When a Remote Panel and an IPDirector share the control of some PGMs in exclusive secondary control mode, the following principles apply:

- When a playlist/timeline is controlled by the Remote Panel on a PGM, the playlist/timeline remains the current one when IPDirector is given the control on the PGM.
- When a playlist/timeline is controlled by IPDirector on a PGM, the playlist/timeline remains the current playlist on the Remote Panel when the operator takes back the PGM control.
- When several playlists/timelines have been controlled by IPDirector on several PGMs and the operator takes back the PGM control, the current playlist/timeline on the Remote Panel is the one that was the current playlist when the control was given away, in other words the current playlist/timeline does not change.
- When the playlist/timeline controlled by IPDirector is not visible by the Remote Panel, the current playlist/timeline on the Remote Panel is the one that was the current playlist when the control was given away, in other words the current playlist/timeline does not change.

6. PGM-PRV Mode

6.1 1PGM+PRV (Press A from MAIN MENU)

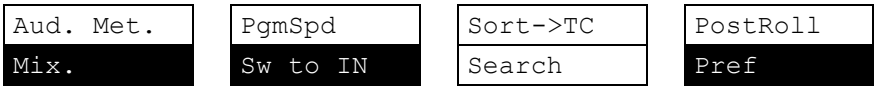


At least 2 playback channels must be available to run this configuration.

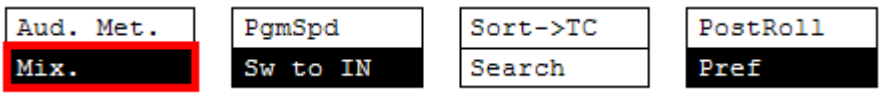
This mode allows the operator to make replays with/or without transition effects between all outputs. A string of replays can be put together and played back at the operator's discretion.

The LCD display is divided in two menus controlled by soft keys (A,B,C,D). To gain access to the upper menu, press **MENU** from the Remote Panel.

6.1.1 Secondary Menu



Mix / Wipe L>R / Wipe R>L / Wipe U>D / Wipe D>U / Cut



These options determine the transition effect that will occur between the PGM and PRV pictures. The mix, wipe and cut are on the same location. Pressing this button will browse through these effects, showing the active one on the LCD menu. Please refer to Setup menu to select the duration of the transition effect.

PgmSpd/VarMax

Pressing **PgmSpd** once enables the Program Speed mode and highlights this function on the LCD. Pressing the key once more enables the Var Max mode and highlights this function on the LCD. The **PLAY** key is flashing red while either of these modes is enabled.

- **Program Speed mode:** In this mode, only two speed values are available from the lever: 0% when the lever is in the lower position, or the speed defined in the **Operational Setup** menu (p.9.1 F3) for any other position of the lever.
- **Var Max mode:** the speed range defined by the lever is limited between 0% and the speed value defined in the **Operational Setup** menu (p.9.1 F3).

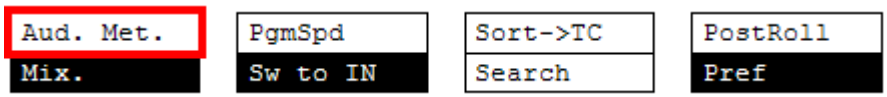
Sw To In

When this function is enabled (highlighted), a camera change will cause a jump to the corresponding IN point if existing. It will switch in Sync if no IN point exists for the current element, or if SW to IN is OFF.

Pref

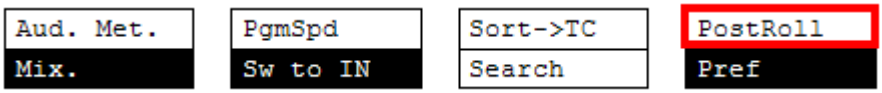
Selecting this function enables the Preference mode (see section 5.6 ‘Preference Mode (PREF)’ for more details).

Aud.Met.



This option enables/disables the display of audio meters for all channels using the OSD of the output monitors.

PostRoll



When the Post-Roll mode is enabled, that function is highlighted on the LCD and a “P” appears on the OSD of the output monitors.

When the user exits Multicam with the Post-Roll mode on, this mode will still be enabled when Multicam is restarted.

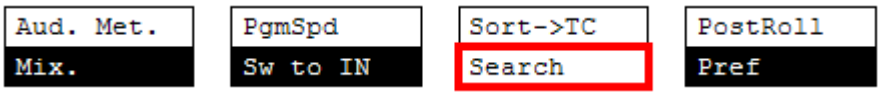
The Post-Roll mode works as follows depending on the element played:

- When a clip is played, it will not stop on the Short OUT point, but will continue to play through the Short OUT point by the Post-Roll duration defined in the **Setup** Menu.
- When a record train is played, the same will happen if the **Record trains OUTs** parameter is set to “Freeze” in the **Operational Setup** menu (p.2.3 F1).
- When a playlist is played, the Post-Roll will apply only to the last clip of the playlist.

Sort->TC

This function allows the operator to search for all clips that contain a particular timecode. For more information on this function, refer to the section ‘Sort->TC’, on page 47.

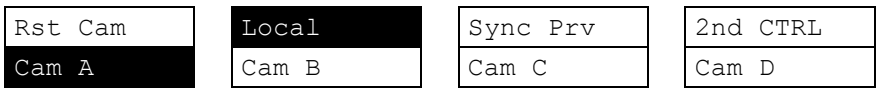
Search



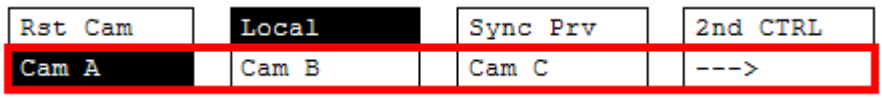
This function allows the operator to search the database using keywords and ranking. Refer to the chapter 10 “Keyword Management” on page 71 for further details.

To return to the operational menu, press the **MENU** key from the Remote Panel.

6.1.2 Operational Menu



CAM A/ B /C /D

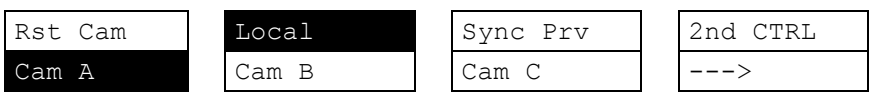


If **PRV CTL** is OFF, select the camera to assign to the PGM output. This camera key will be highlighted in the menu.

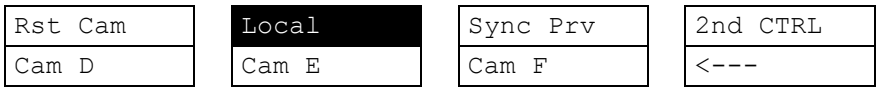
If **PRV CTL** is ON, select the camera to assign to the PRV output. This camera key will be highlighted in the menu.

Note

In 5CAM configuration (5 recorder channels and 1 player channel) or when loading a clip where CAM E or F exists, the operational menu will display:

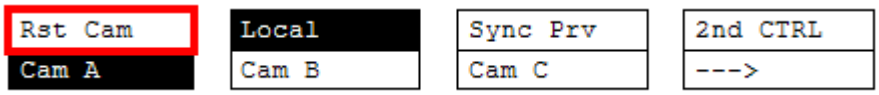


By pressing the **D** key (- - - >), the operator has access to the D, E and F cameras. The operation menu becomes:



Press the **D** key (< - - -) to return to CAM A, B, C selection.

Rst Cam



This function restores the position of cameras on the active channels: CAM A on PGM1, CAM B on PRV.

Note

When a clip/playlist is loaded on a channel, switching back to Live mode will recall the record train, which was last used on that output. This avoids too frequent uses of the RST CAM function.

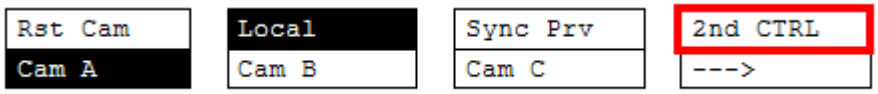
Local

This function allows the user to reconnect to the local LSM after having accessed distant clips or record trains. The function is highlighted when the user is connected to both clips and record trains on the local LSM. It is displayed only on Master/Server LSMs when they are connected to the SDTI network.

Sync Prv

This option allows the user to synchronize the PRV with the timecode and speed of the PGM output. This function is not available with remote record trains.

2nd CTRL



This function allows the operator to swap the control of one or several play channels between the EVS Remote Panel and a third-party controller. Both controllers receive permanently the status of the channel(s), but only one controller at a time is able to actually control a channel. The secondary controllers are defined in page T2.2 of the **Technical Setup** menu.

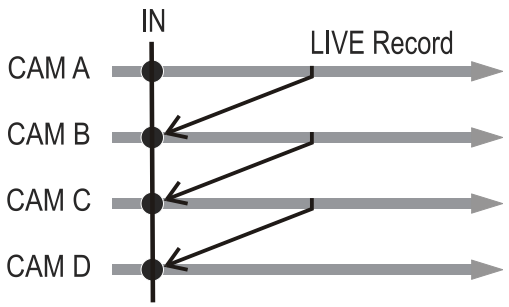
Press this function to enter the 2nd CTRL menu, select the channels that you want to pass to the secondary controller by pressing the corresponding **A** or **B** key, then press **D** (DONE) to validate your selection. Do the same to bring the control of a channel back to the EVS remote.

6.2 Full Control and Lever Control

Controlling both PGM and PRV is done when PRV CTL (direct access key from the remote) is not activated.

Once selecting PRV CTL, the operator will have control of the PRV with the jog dial and most buttons, while the lever and the **Play** button will control the PGM output. At this point, selecting clips will call them up on the PRV side.

The combination of the PRV CTL and the SW to IN functions allows the operator to auto-chain cameras from the same IN point.



When an IN point has been marked, the operator activates the **PRV CTL** and sets ON the **SW to IN** option. Then the slow motion of one camera can be started from this IN point. The operator selects another camera in the PRV output and, via the **TAKE** button, can auto-chain cameras from the same IN point on the PGM output.

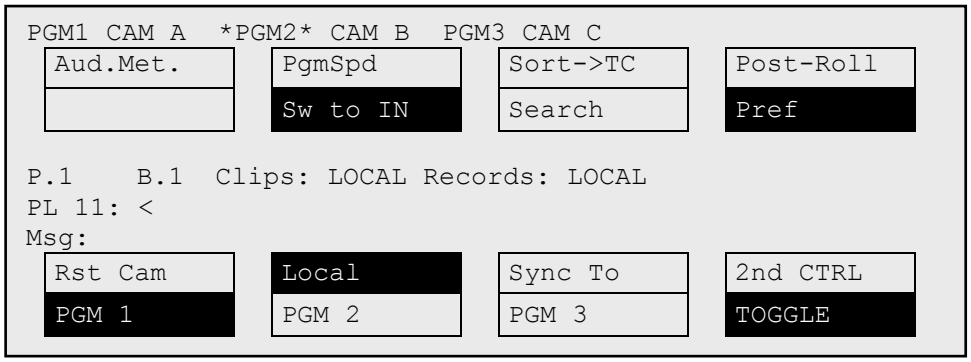
7. Multi PGM Mode

7.1 1/2/3 PGM modes (press A or B from Main menu)

Multicam has two modes for its basic operation, 1 PRV/PGM mode or Multi PGM mode:

- The **1PGM+PRV mode**, as described previously, is the more powerful of the two, allowing interaction between all outputs. Here, synchronized replays can be rolled and chained between the cameras with either a mix, a wipe, or a cut between them.
- The **MULTI PGM** mode is more basic, which gives the operator independent control of all outputs.

  In this mode, all outputs can be controlled together (such as jogging back to a certain action, with all outputs) or they can be controlled individually (either PGM 1, 2, or 3).



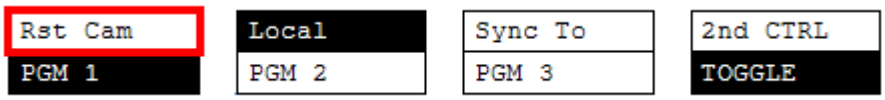
7.1.1 Secondary Menu

The secondary menu can be called by pressing the **MENU** key and is similar to the 1PGM+PRV mode, except that the **A** function is empty since it is not possible to create a transition between the channels in this mode. Please refer to the Chapter 6 ‘PGM-PRV Mode’, on page 26 for description of the other functions of the secondary menu.

7.1.2 Operational Menu

The operational menu in Multi PGM mode gives access to the functions detailed in the following paragraphs:

Rst Cam

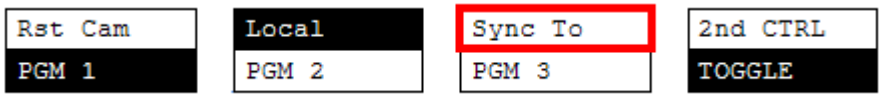


This function restores the position of cameras on the active channels: CAM A on PGM1, CAM B on PGM2, etc.

Note

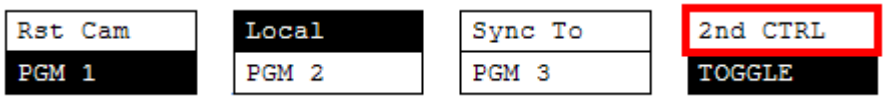
When a clip/playlist is loaded on a channel, switching back to Live mode will recall the record train, which was last used on that output. This avoids too frequent uses of the Rst Cam function.

Sync To



This button allows you to synchronize the selected PGM in use with another one. Press this button and then select the PGM to be used as a reference. This function is not available with network trains.

2nd CTRL



This function allows the operator to swap the control of one or several play channels between the EVS remote and a third-party controller. Both controllers receive permanently the status of the channel(s), but only one controller at a time is able to actually control a channel. The secondary controllers are defined in page T2.2 of the **Technical Setup** menu.

Press this function to enter the **2nd CTRL** menu, select the channels that you want to pass to the secondary controller by pressing the corresponding **A**, **B** or **C** key, then press **D** (DONE) to validate your selection. Do the same to bring the control of a channel back to the EVS remote.

Note

The 1PGM mode is a simplified version of the 2 or 3PGM modes. The operational menu has less functions:

	Local		2nd CTRL
Cam A	Cam B	Cam C	Cam D

Also, the user does not need to select a channel to enable or disable the secondary controller. Since there is only 1 channel available in this mode, the operator just has to press **SHIFT+D** to swap the control between the secondary controller and the EVS remote.

Toggle / All

Rst Cam	Local	Sync To	2nd CTRL
PGM 1	PGM 2	PGM 3	TOGGLE

The **Toggle** function is only available in 3PGM mode:

- **Toggle OFF:** Selecting an output channel results in controlling that channel and disables the control on others.
- **Toggle ON:** Selecting a channel will alternatively enable/disable the control over that channel without changing the control on the others.
- **All:** This enables the control on all channels.

How to Assign a Camera to a Channel

In Multi PGM mode, to change the current camera on each PGM, proceed as follows:

7. In the operational menu, select the PGM to which you want to change the current camera.

   The **TAKE** key at the bottom of the remote is lighting red.

8. Press the **TAKE** key.

   It lights green and the menu on the LCD display changes to let you select the desired camera.

Rst Cam	Local		
CAM A	CAM B	CAM C	CAM D

9. Press the camera you want to associate to the selected PGM.
10. Press **TAKE** again to return to the PGM selection menu.

Playlist Conditional Mode

This mode is only available in 2PGM and 3PGM modes. It allows the operator to load and control several playlists simultaneously from the same Remote Panel, or to load a playlist on one channel while performing other operations on the other channel(s). To use this mode, the **Load Playlist** parameter of the **Operational Setup** menu must be set to **Conditional** (p.3.3 F2).

To use this mode, select one channel (for example PGM1), and press the PLST key one, two or three times to enter the PLST EDIT or the PLST DIFF mode (refer to the “Playlist Management” Section of this manual for details about these modes). You can notice that the **TAKE** key lights green. Pressing the **TAKE** key will allow the operator to return to the PGM selection menu, and select another PGM channel where he can start a replay, load a clip or another playlist, etc.

In this mode, if the operator selects a PGM channel where a playlist is loaded and presses the **TAKE** key, he will enter again the PLST EDIT or PLST DIFF mode.

When playlists are loaded on all channels currently controlled by the operator in MULTI PGM mode, the **TAKE** key lights red. If the **TAKE** key is pressed, the remote will enter a specific PLST DIFF mode, where the operator can control several playlists simultaneously, and browse them or roll them in sync. **NEXT** and **SKIP** functions are also available and will apply on all controlled playlists. The **TAKE** button will not light red if one of the controlled channels does not contain a playlist.

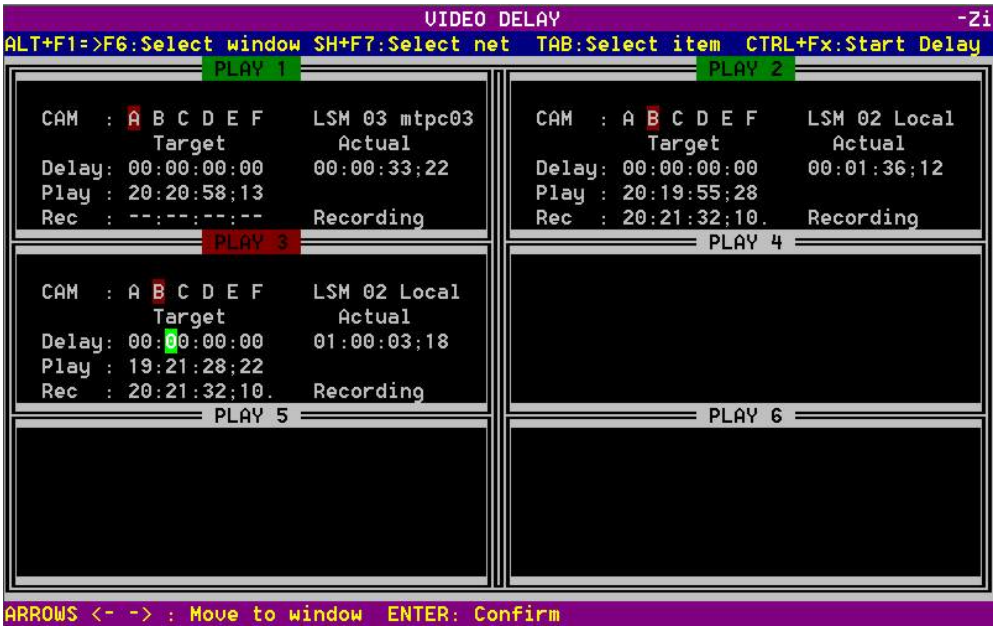
Practical example

The operator builds a playlist with Fills and another playlist with Keys. He sets the **Playlist Load** parameter to **Conditional** in the setup menu, then enters the 2PGM mode, selects the Fills playlist as current playlist, presses A to gain control on PGM1, presses PLST two or three times to enter the PLST DIFF mode and cue up the Fills playlist to its 1st clip. Then he presses the **TAKE** key to return to the **PGM selection** menu, selects the Keys playlist as current playlist, presses B to gain control on PGM2, presses PLST two or three times to enter the PLST DIFF mode and cue up the Keys playlist to its 1st clip. Then he presses the **TAKE** key to return to the PGM selection menu, presses **D** to gain control on both PGM channels, then presses **TAKE** to enter the **PLST DIFF** menu. He will see the content of both playlists side by side on the LCD screen, and can browse them or play them in Sync at any speed, and perform **SKIP** and **NEXT** commands as needed.

8. Video Delay

When the Multicam software has been configured with a base configuration = Video Delay in the **Channel Parameters** menu, the Delay Screen will appear automatically when the application is started. In this case, all play channels will be available from the Delay screen.

If Multicam is running a base configuration different than Video Delay, this screen can be called manually from the Clip screen, Playlist Screen or Network Screen by pressing SHIFT + F7 on the keyboard. In this case, only the play channels assigned to user #1 (i.e. the 1st EVS Remote Panel if the base configuration is LSM or maXS, or the 1st protocol if the base configuration is in slave mode).



For each play channel, the operator can adjust:

- the video and audio source (camera angle, and source server if several units are connected on an SDTI network);
- the desired delay in hh:mm:ss:fr.

For each play channel, the operator can view:

- the actual delay in hh:mm:ss:fr;
- the timecode of the on-air picture
- the timecode of the incoming picture on the associated record channel;
- the status of the associated record channel (Recording / Idle)

How to Configure the Video Delay Parameters of a Play Channel

To configure the Video Delay Parameters of a Play Channel, proceed as follows:

1. Select the play channel to configure by pressing **ALT**+the corresponding **F_** key on the PC keyboard (ex: ALT+F1 for PGM1, ALT+F2 for PGM2/PRV, etc)
2. If you want to use another server on the SDTI network as a source, press SHIFT + F7 on the PC keyboard to call up the network list. Use the arrow keys to select a server, and press **ENTER** to validate.
3. Select the camera angle: use the left / right arrow keys, or the **<TAB>** key to move the green cursor on the desired camera, the press **ENTER**. The new camera angle is loaded on the channel.
4. Set the new value for the delay: use the left / right arrow keys, or the **<TAB>** key to move the green cursor over the TARGET DELAY field, and enter the desired delay value in hh:mm:ss:fr. Press **CTRL**+the corresponding **F_** key on the PC keyboard to activate the new delay on the selected channel (ex: CTRL + F1 start the new delay on PGM1). If the duration of the record train is lower than the target delay, the channel will pause on the first recorded picture until the record train is long enough for the desired delay. In this case, the message “WAIT” is displayed on the OSD of that channel.

9. Clip Management

9.1 Introduction

9.1.1 Clip Structure

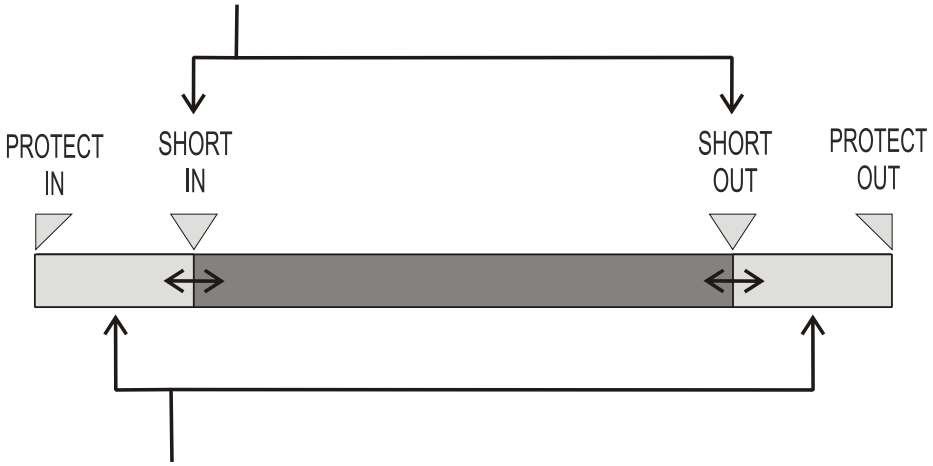
A clip is defined by Short IN and Short OUT points. When referring to Short IN and Short OUT points, the operators usually use the terms IN point and OUT point.

When Short IN and Short OUT points are set, the system automatically write protects a user definable length of material before and after the Short IN/OUT points respectively, these are referred to as the guardbands.

For this reason, the IN point before the guardbands and the OUT point after the guardband are called Protect IN point and Protect OUT point.

It is possible to trim a clip by redefining Short IN and Short OUT points.

If Short IN and Short OUT points are defined, only the fields between those two points will be played if the sequence is recalled (the same applies when the sequence is included in a playlist).



Fields between Protect IN and Short IN and fields between Short OUT and Protect OUT (**guardbands**) can be reached with the jog. So the Short IN and Short OUT points can be redefined.

Note

- Protect IN & Protect OUT points of a clip cannot be replaced by new ones.
- Short IN & Short OUT points of a clip can be replaced by new ones.
- Short OUT point is excluded. The clip freezes on previous field when playing back (with Post-Roll disabled).
- (Short) IN & OUT are always on even fields. This is automatic.
- The guardband beyond the Short OUT point is created with the material available when the operator saves the clip by pressing the selected **F_** key. Therefore, this guardband can sometimes be shorter than the value defined in the Setup menu.

9.1.2 Clip Availability on Disks

Various clip types can be distinguished depending on whether they are available on the disks or not. Depending on the clip availability on disks, you can perform specific actions on the given clip or not.

Clip on disk	Clips which are protected on disks, and which have Short IN and Short OUT points present on disks. All the material is available on the disk.
Growing clip	Clips which are protected on disks, and which have a Short IN point, and possibly Short OUT point defined on disks. Since the record process is still undergoing, some of the material is already on the disk but not all of it.
Reserved clip	Clips for which the position has been reserved on the SDTI database but for which there is no Short IN and Short OUT points, nor any protect present on disks.

9.2 Using the EVS Remote Panel

9.2.1 How to Create a Clip

To define a clip, proceed as follows:

1. Select the LIVE mode.
2. Define your Short IN point using the jog dial. Press the **IN** key to mark your Short IN point of the clip.
3. Search for the desired Short OUT point and then press the **OUT** key to mark it.

A clip can be created with only IN point or only OUT point. The system will automatically define the clip duration according to the default duration defined in the Setup menu.

Note

You can mark an IN or OUT point on a paused record train and go back to live without losing the point marked by pressing SHIFT+<Return>.

9.2.2 Storing a Clip

How to Store a Clip

To store a clip on a given location, proceed as follows:

1. Define a clip by marking the IN and/or OUT points
2. Select the page where the clip will be stored by pressing SHIFT+PAGE+F_ key corresponding to the page.

   Page 1 contains clips 110 to 199. Page 2 contains clip 210 to 299, and so on.
3. Select the bank where the clip will be stored by pressing SHIFT+F_ key corresponding to the bank, using key **F1** to **F9**. The **F10** key is reserved for the playlist bank available on each page.
4. Select the location of the clip to store by pressing the corresponding **F_** key.

The clip is created on the specified location. The primary timecode of the clip is the primary timecode defined on the train where and when the clip has been created.

Example

To create the clip on the position n°212 (page 2, bank 1, clip location 2):

1. Press SHIFT+PAGE+F2 to select page 2.
2. Press SHIFT+F1 to select bank n°1.
3. Press **F2** to select location n°2 on the selected page and bank.

Important

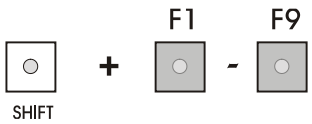
The **AUTO-SAVE** process automatically saves clips and playlists at least every minute. Exiting the software (ALT+Q) will also save the clips and playlists.

9.2.3 Recalling a Clip

How to Recall a Clip

To recall a clip, proceed as follows:

1. Select the Clip page 1, 2, 3… to 10 (**PAGE** key).
2. Select the bank in which the desired clip is located (the **F10** key is reserved for the playlist bank available on each page).



3. Select the desired clip via the **F1 - F10** keys.

Clip Recalled Based on the PREF Setting

If **PREF** is ON, the preferred camera angle of the clip will appear on the primary channel, the secondary camera angle on the next controlled channel, then the other camera angles on the next channels in alphabetical order.

Example: If the preferred camera angle for clip 124 is camera C, when loading the clip, 124C is loaded on the primary channel, whatever the camera present on that channel before loading the clip.

If **PREF** is OFF, when recalling the clip, the camera angle will be the same as the one who was already present on each controlled channel. If that camera angle does not exist, the first available camera angle of the clip will be used.

Example: If camera B is the current camera on the primary channel, when calling clip 124, it is 124B that appears on the primary channel, even if it is not the preferred camera angle.

When the operator is controlling only one channel (such as with **PrvCtl**), the clip will appear at that location only. In the case of a clip containing a single camera angle (only an «A», «B», «C» or «D» clip), when in full control of all outputs, the clip recalled will appear on the primary channel.

Toggling Between the Camera Angles

If **Recall clip toggle** is enabled in the **Operational Setup** menu (p.9.1 F6), pressing several times the **F_** key will always recall the first frame of the clip, but showing the next camera angle every time the **F_** key is pressed.

9.2.4 Playing Back a Clip

Playback Speed Features

You can play back a clip using several playback speed features explained above in this user manual. This section summarizes the various playback speed features and refers to more detailed sections on these features:

- Playback of a clip at the default playback speed using the **PLAY** key
- Playback of a clip at a speed varying from 0% to 100% using the lever in a basic way
- Playback of a clip at a speed varying from 0% to a maximum speed defined in the **PGM Speed/Var max** parameter (p.9.1 F3) in the Operational Setup menu on the Remote Panel.

  To use this feature, you need to activate the **VarMax** option available from the secondary menu in PGM/PRV mode. For more information, refer to the section 'PgmSpd/VarMax', on page 27.
- Playback of a clip at a given predefined speed defined in the **PGM Speed/Var max** parameter (p.9.1 F3) in the **Operational Setup** menu on the Remote Panel.

  To use this feature, you need to activate the **PgmSpd** option available from the secondary menu in PGM/PRV mode. For more information, refer to the section 'PgmSpd/VarMax', on page 27.

How to Play Back a Clip

To play back a clip, proceed as follows:

1. Store a clip.
2. Recall the defined clip which will be played, the corresponding **F_** key lights red.
3. Press the **PLAY** key or use the lever to start playing back the clip,

9.2.5 Recall and Playback of Growing Clips

You can recall and play growing clips, i.e. clips that are in the process of being created on a disk.

As long as the OUT point of a growing clip is not available on the EVS server, the LED corresponding to the growing clip location blinks green when it is called and red when it is loaded on the Remote Panel. The clip LED will no longer blink as soon as both IN and OUT points are available on the EVS server.

If the play reaches the end of the available material, the play will freeze until new material is available for playout. When new material is available, the play resumes.

When the OUT point of the clip is known, the remaining time is displayed.

When the OUT point of the clip is not known, the remaining time display switches to --:--:--:-- until the entire clip is copied.

9.2.6 Clearing Clips

Which Clips Can Be Deleted?

You can clear clips available on disks or growing clips.

The function key that corresponds to the clip location on the Remote Panel must be green for the user to be able to delete it:

- Loaded clips cannot be deleted.
- Clips included in a playlist or currently used by another operator, cannot be cleared either in network mode.

In all cases, a warning message will appear.

How to Clear a Clip

To clear a clip, proceed as follows:

1. Select the appropriate page and bank where the clip to be erased is stored.
2. Press **CLEAR,** followed by the **F_** key that corresponds to the clip.

Important

In most cases, no confirmation is required and the clip will be instantly deleted.

3. If the clip is protected or if the **Confirm del clp/plst** parameter is set in the **Operational Setup** menu (p.5.1 F3), a warning message appears.
4. Press **ENTER** to confirm and the selected clip will be erased.

How to Clear Unprotected Clips in a Bank?

To clear all unprotected clips stored on a given bank, proceed as follows:

1. Select the page that includes the bank on which you want to delete the unprotected clips in a clip bank.
2. Press CLEAR+SHIFT, and the **F_** key that corresponds to the requested clip bank.

   The following confirmation message will be displayed:

```
                    Caution:
        This will delete all unprotected clips
                  stored on bank X

 [Menu] : Cancel                    [Enter] : Confirm
```

3. Press **ENTER** to confirm and the unprotected clips on the bank are deleted.

How to Clear All Unprotected Clips

The **Clear All Clips** command will only delete the non-protected clips. The clips stored on protected pages as defined in the Setup, as well as the clips protected by another protocol, or clips included in playlists, will not be deleted by this operation.

To clear all non protected clips, proceed as follows:

1. Go to the main menu (**SHIFT+MENU**)
2. Press the function key **F7** on the Remote.
3. Press **ENTER** or **CLEAR** on the Remote Panel to confirm/cancel the operation.

If the system is connected to the XNet network, an additional confirmation is required.

A message on the video monitor will notify the operator when the operation is complete.

Important

The **Clear All Clips** command is different from the **Clear Video Disks** command available from **Maintenance** menu in EVS software.

- The **Clear All Clips** command only deletes non-protected clips.
- The **Clear Video Disks** command from EVS' Maintenance menu is more radical and definitely erases all video and audio data from disks. Clips stored in protected pages are also deleted.

9.2.7 Copying or Moving Clips

Principles About Copying Clips

Copying a clip gives a new clip which is totally independent from the original. It can therefore be trimmed, named, deleted, etc. without affecting the original.

Copying clips on the same server does not duplicate the original material on the video drives: it simply creates a separate reference to the same video material. This means that the capacity will not decrease when making copies of clips on the same machine. It also means that deleted copies of clips will not increase the available capacity of the server, as long as one instance of the clip remains.

Copying clips across the network will reduce the capacity of the server where the clip(s) is (are) copied by the duration of the clip(s).

Principles About Moving Clips

When moving a clip using the **Move** function, the reference to this clip in playlists will automatically be updated. This is very useful when an operator wishes to re-organize his clips across different pages and banks, since playlists will not be affected. If (s)he copies the clips and then deletes the originals instead of using the **Move** function, the reference to the original clips will be removed from the playlists when deleting these clips.

Settings on Copy/Move Clips

When you copy/move a clip, two settings are available to specify how the clip should be copied or moved:

Clip Mode/Cam Mode

Pressing the D key in the Copy/Move LCD window allows the user to select a value for this setting:

- **CLIP mode:** all camera angles of the clips will be copied/moved.
- **CAM mode:** only the camera angles of the clip loaded on the controlled channels will be copied/moved.

Short/Long Mode

This option is only available for a network copy, not for a local copy or for a move.

Pressing the **C** key in the Copy/Move LCD window allows the user to select a value for this setting:

- **SHORT mode:** only the material between the Short IN and Short OUT points of the original clip, augmented by the duration of the guardbands defined on the destination system, will be copied.
- **LONG mode:** the entire original clip, including its guardbands, will be copied to the destination system.

Default Settings

The default settings for the COPY/MOVE menu are: COPY, SHORT, CLIP. If the operator changes these settings, the new settings will be re-used the next time this menu is called. The default settings will be automatically restored when starting a new Multicam session.

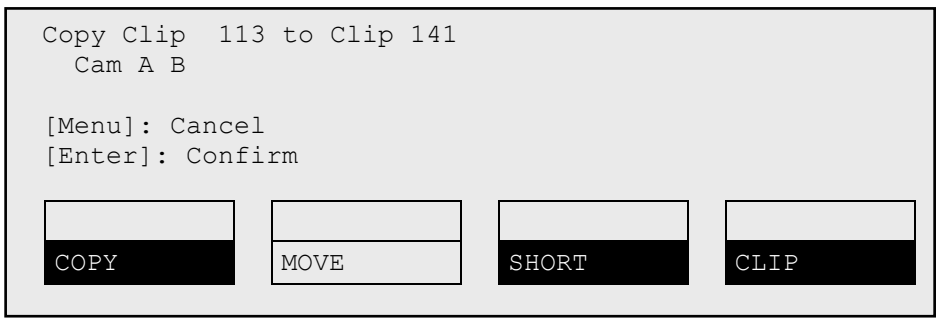
How to Copy or Move a Clip

It is possible to copy or move a clip on the same server or to another server. Growing clips can also be copied and moved.

To copy or move a clip from the Remote Panel, proceed as follows:

1. Select the original clip.
2. Select an empty location on an EVS server connected to the network.

   A new menu appears on the LCD display of the Remote Panel, with the corresponding message on the OSD of the output monitors:



3. Select the **COPY** or **MOVE** function by pressing the **A** or **B** key.

   The corresponding function will be highlighted on the LCD and the message on the OSD will be updated accordingly.
4. Select the CLIP or CAM mode with the **D** key.
5. Select the SHORT or LONG mode with the **C** key.

6. Press **ENTER** to confirm or **MENU** to cancel.

When doing a network copy, the VGA displays the % copied of each clip.

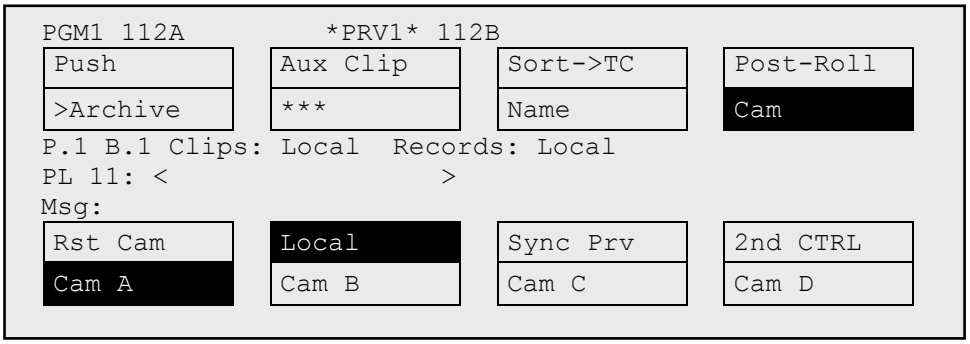
How to Cancel a Network Copy on the Remote Panel

When the clip is copying, its light flashes green. Pressing **CLEAR**+the corresponding **F_** key allows cancelling the network copy. A confirmation screen comes up to cancel the network copy: “Cancel network copy ? MENU: Do not cancel copy - ENTER: Cancel copy”

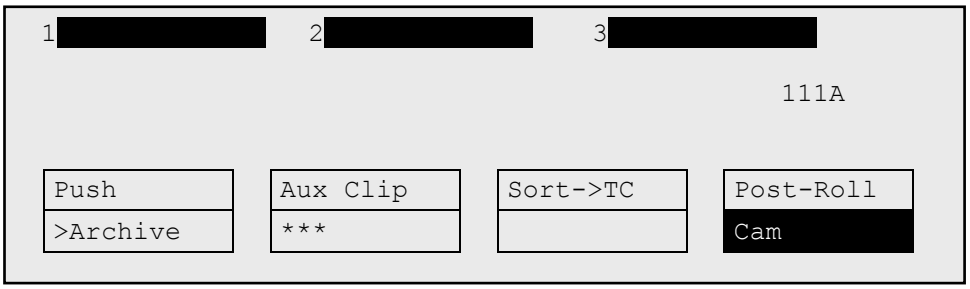
9.2.8 Secondary Menu in Clip Mode

Overview

In Clip mode, the secondary menu of the Remote Panel is different from the Record Train mode:

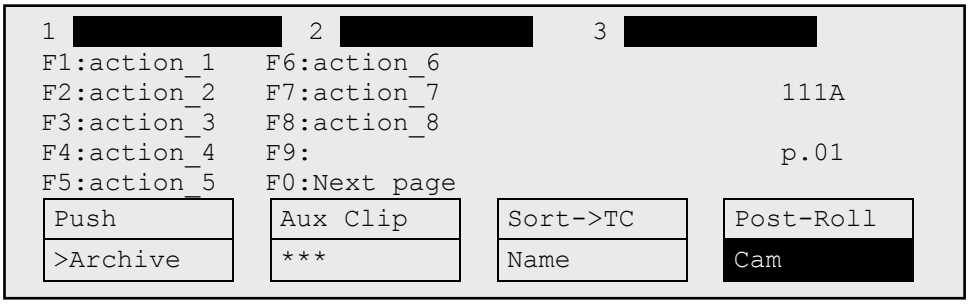


Press **MENU** to access the secondary menu. If no keyword file is selected in the setup, the LCD display will be:



In this mode of the secondary menu, clips can still be directly recalled using the F1-F10 keys of the Remote Panel.

If a keyword file is selected in the setup, the LCD display will be:



In this mode of the secondary menu, the **F1-F10** keys are used for keyword assignment, and thus can no longer be used to recall clips. For a description of the keyword-related functions, please refer to the “Keyword Management” Section of this manual.

The ID of the current clip appears on the end of line 3 of the LCD display.

Push

Introduction

The **Push** function allows you to easily send a copy of a clip to another machine on the network, **either via the GigE network or the SDTI network**.

Principle

- If one or two default targets (push machines) are defined in the setup, the clip will be automatically sent to these machines.
- If no default target is defined, the list of machines available on the network will appear. As soon as the operator selects one of them, the clip is pushed.

Depending on the push settings defined, the default targets or the list of possible targets submitted to you will contain EVS servers on the SDTI network and/or EVS servers on the GigE network.

For more information about the **Push** settings, refer to the **Operational Setup** menu on the Remote Panel, page 7.1.

In both cases, a message appears for a few seconds on the LCD to confirm that the clip is being pushed and indicate the clip location where it will be stored on the receiving machine.

If the Receive Page(s) defined on the destination machine is (are) full, the operator who tries pushing the clip is notified. While this message is being displayed, the operator can press the **MENU** key at any time to return to the normal menu. Depending on the CAM/CLIP mode selected by the **D** key, only the camera angles loaded on the controlled channels are pushed (CAM mode), or all camera angles of the clip are pushed at once (CLIP mode).

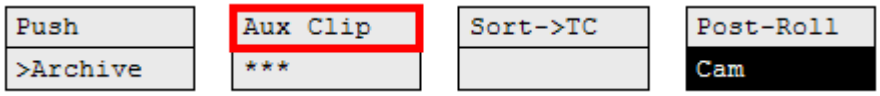
>Archive

The Archive function allows the operator to flag a clip to place it in the archive queue of the XFile[1] defined in the Operational Setup menu (p.7.1 F3).

This function is blinking when the clip is flagged for archiving, but has not yet been archived. It is permanently highlighted when the archiving of the clip is completed.

Depending on the mode selected with the **D** key (CLIP/CAM), the >ARCHIVE flag is assigned only to the camera angles of the clip loaded on the controlled channels (CAM mode), or to all camera angles of the clip (CLIP mode).

Aux Clip



This function allows assigning a clip as auxiliary audio clip to the current playlist. Press CLEAR+Aux Clip (CLEAR+SHIFT+B) to remove the current auxiliary clip. Refer to the chapter 11 ‘Playlist Management’, on page 88 for more details.

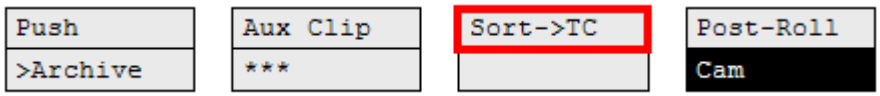
Ranking (***)

The Ranking function allows assigning a ranking to the current clip. Pressing several times this key will scroll through the different values: 0 (***, not highlighted).

Depending on the mode selected with the **D** key (CLIP/CAM), this ranking is assigned only to the camera angles of the clip loaded on the controlled channels (CAM mode), or to all camera angles of the clip (CLIP mode).

If the **Keyword info** parameter of the **Operational Setup** menu (p.1.1 F2) is set to “Yes”, the ranking will appear on the OSD of the output monitors when cueing up the clip.

Sort->TC



The Sort->TC function allows the operator to search the database for all clips or trains containing a specific timecode. Press SHIFT+C again in Set TC mode to call it.

When calling this function, the timecode of the current picture is used as a default selection. The operator can immediately perform the search or he can edit that timecode before starting the search.

For more information on how to search for clips by timecode, refer to the section 9.2.9

[1] The EVS Xfile is a 2U device with 2 removable hard drives, that can be connected to the XNet SDTI network. Clips can be archived to/restored from the removable media.

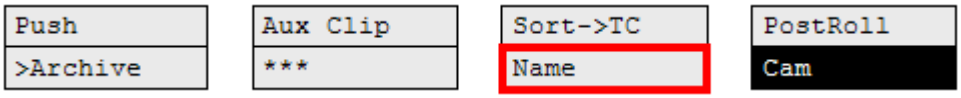
'How to Search for Clips by Timecode', on page 49.

Set TC

The Set TC function is only available in SHIFT+B on the Sort->TC menu. It allows the operator to restripe the timecode of a clip. This function is explained in details in the section 9.3.12 'How to Restripe the Timecode of the Current Clip', on page 61.

Depending on the mode selected with the **D** key (CLIP/CAM), the new timecode value is assigned only to the camera angle of the clip loaded on the primary channel (CAM mode), or to all camera angles of the clip (CLIP mode).

Name



The Name function is only available if a keyword file is selected in the Setup menu. It is used to name a clip based on available keywords. Refer to the chapter 10 'Keyword Management', on page 71 for more details. When the Name function is selected, pressing SHIFT+C again will call the Search function.

Search

The Search function is "hidden" behind the Name function. Press SHIFT+C again in Name mode to call it. It allows the operator to search the database for clips based on keywords and ranking. Please refer to Chapter 10 'Keyword Management', on page 71 for details.

Post-Roll

This function enables/disables the Post-Roll mode. This mode is explained in details in the section 'PostRoll', on page 27.

Clip/Cam

Pressing the **D** key will toggle between CAM and CLIP modes on the remote. Please note that this mode on the remote and on the VGA screens is never synchronized. In CAM mode, the Push, Archive, Ranking assignment, Keyword assignment, and Name functions will apply only to the camera angles of the clip loaded on the controlled channels. In CLIP mode, these functions will apply on all camera angles of the clip.

9.2.9 How to Search for Clips by Timecode

Note

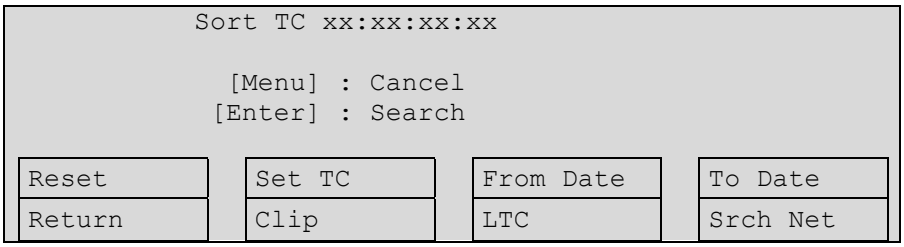
The Reset function resets all default parameters, including the ones related to the material and the TC type to search on.

Procedure

To search for clips or trains containing a specific TC, proceed as follows:

1. From the main Remote screen in Clip mode or Train mode, press **MENU** to access the secondary menu.
2. Press **SHIFT+C** to access the Sort TC function.

   The following screen is displayed:



3. If requested, press **SHIFT+C** to define a date from which the search should be applied:
   a. Type the date in dd/mm/yy format with the **F1** to **F10** keys.
   b. Press **ENTER** to confirm and exit the field.
4. If requested, press **SHIFT+D** to define a date to which the search should be applied:
   a. Type the date in dd/mm/yy format with the **F1** to **F10** keys.
   b. Press **ENTER** to confirm and exit the field.
5. Press the **B** key to specify whether to search for clips (Clip), train (Rec) or both (Clip+Rec).

   Press several times the **B** key to select the requested value.
6. Press the **C** key to specify whether to search for the LTC (LTC), the user-defined timecode type (USER) or whatever TC type (LTC+USER).

   Press several times the **C** soft key to select the requested value.
7. Press the **D** key to specify whether to search only for local clips (Srch Loc) or on the entire XNet Network (Srch Net).

   Press several times the **D** key to select the requested value.
8. Press **ENTER** to launch the search.

Results

If matching clips are found, the Remote Panel will automatically be in Browse mode (the **BROWSE** key is red), allowing the operator to quickly view the frame of each clip corresponding to the requested timecode by rotating the jog dial.

To be able to jog inside a clip, disable the Browse mode by pressing on the **BROWSE** key and move the jog dial. To return to the Browse mode inside the search results, press the **BROWSE** key again.

Search results are reset when going by to LIVE mode, or when a new search is performed.

Examples

- You have loaded the picture of an interesting event, and you want to see all clips that contain that same event. Call the Sort ->TC function, select the network/local search option and launch the search. Move the jog dial and you will see the same event on the same timecode from all available camera angles that have been clipped.
- You know the timecode of a particular event and you want to see all clips containing that event. Call the Sort ->TC function, edit the timecode to the desired value, select the network/local search option and press **ENTER**: you will obtain the same result as above if the timecode belongs to the same type as the one previously mentioned.

9.2.10 How to Shorten a Clip

To shorten a clip, proceed as follows:

1. Recall the desired clip by pressing the corresponding **F_** key.
2. Move the jog dial to browse the clip and reach to the desired Short IN point.
3. Press the **IN** key to mark a new Short IN point. The new Short IN point is instantly saved.
4. Move the jog dial to reach the desired Short OUT point.
5. Press the **OUT** key to mark a new Short OUT point. The new Short OUT point is instantly saved.

Move the lever or press the PLAY key to play the clip. The replay will stop at the new Short OUT point (or after the Short OUT point if the Post-Roll mode is enabled).

GOTO IN and GOTO OUT

You can use **Goto IN** and **Goto OUT** functions to jump immediately onto Short IN or Short OUT points respectively.

9.2.11 Restriping the Timecode of a Clip

Restrictions on the Remote Panel

The function to restripe the timecode of a clip via the Remote Panel is more restricted than via Multicam on the VGA:

- You cannot choose which timecode type you modify: you will automatically modify the

primary timecode of the clip.

- You cannot modify the date of the clip.
- You cannot modify the type for the primary timecode of the clip.

If you want to modify the date, the type of the primary timecode or the user-defined timecode, you need to go to the Set Timecode screen in the VGA. For more information, refer to the section 9.3.12 'How to Restripe the Timecode of the Current Clip', on page 61.

How to Restripe the Timecode of a Clip

To restripe the timecode of a clip on the Remote Panel, proceed as follows:

1. Recall the clip by pressing the corresponding **F_** key.
2. Move the jog dial to reach the picture where you want to define a new timecode.
3. Press the **MENU** key to access the secondary menu.
4. Press **SHIFT+C** to call the Set TC function.
5. Enter the new timecode for the current picture.
6. In 59.94 Hz modes (NTSC), you can select between Drop Frame and Non Drop Frame modes by pressing **SHIFT**+**MENU**.
7. Press the **D** key to select CAM or CLIP mode.
   - In **CAM mode**, only the timecode of the camera angle loaded on the primary channel will be changed.
   - In **CLIP mode**, the timecode of all camera angles of the clip will be changed.
8. Press **ENTER** to confirm or **MENU** to cancel.

The primary timecode of the entire clip is updated according to the new timecode value so that the timecode remains continuous inside the whole clip. Next time this function is called, the value previously used will be set as default.

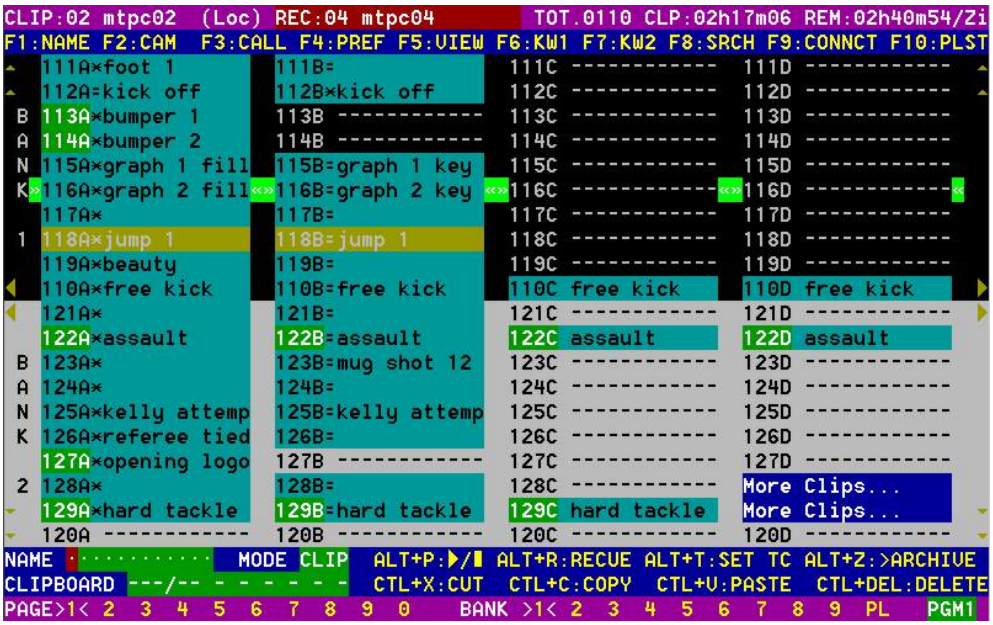
9.3 Using the Clip screen

The VGA Clip screen is accessed by selecting the **F9** key on the keyboard. With this screen, clips can be recalled using the pen and tablet or directly from the keyboard.

Important

The action performed on a channel from the Clip screen is concurrent to any other controller that might be assigned to that channel: EVS Remote Panel or external protocol. A command sent from the Clip screen to a channel will overwrite whatever the channel was doing at that time.

9.3.1 Clip screen fi Standard View



The navigation through the Clip screen, and the various functions available on this screen, can be performed using the tablet and stylus, or the keyboard shortcuts.

9.3.2 The Title Bar

The Title bar contains the status information:

- Number and name of the server currently selected for clips and for record trains (*). The name is blinking red if it is a network machine.
- Total number of clips (i.e. protects, 1 camera angle counting for 1 clip in this count)
- Total duration of all clips
- Remaining capacity on the server (all record trains together; valid for local server only)

Note

The abbreviated word “(Loc.)” appears next to the name if the local machine is currently selected for clips and/or for record trains. The clips displayed in the clip screen belong to this machine.

9.3.3 The Function Bar

The second line displays the available functions. Each function can be called by the corresponding **F_** key of the keyboard, or by clicking with stylus & tablet on the corresponding area on this line.

F1: Name

This function is used to name a clip. For more information on how to name a clip in the VGA, refer to the section 9.3.8 ‘How to Name a Clip’, on page 59.

F2: Clip/Cam

This function toggles between CLIP mode and CAM mode.

- In CLIP mode, actions on a clip will use all available cameras for this clip.
- In CAM mode, actions on a clip will only use the selected camera for this clip.

Other functions such as Name, Delete, Copy, Set TC, >Archive depend on this mode selection.

F3: Call

The operator can gain immediate access to a local or network clip by typing its ID number.

F4: Pref

This option changes the primary camera of a clip. For information on how to change the primary camera of a clip, refer to the section 9.3.9 ‘How to Change the Primary Camera of a Clip’, on page 59.

F5: View

This option changes the standard display to the extended display and vice versa. Refer to the section 9.3.14 ‘Clip Screen – Extended View’, on page 64.

F6: KW1

This option calls the On-Air Keyword screen. Refer to the Chapter 10 ‘Keyword Management’, on page 71 for more details.

F7: KW2

This option calls the Off-Air Keyword Screen. Refer to the Chapter 10 ‘Keyword Management’, on page 71 for more details.

SHIFT+F7: Delay

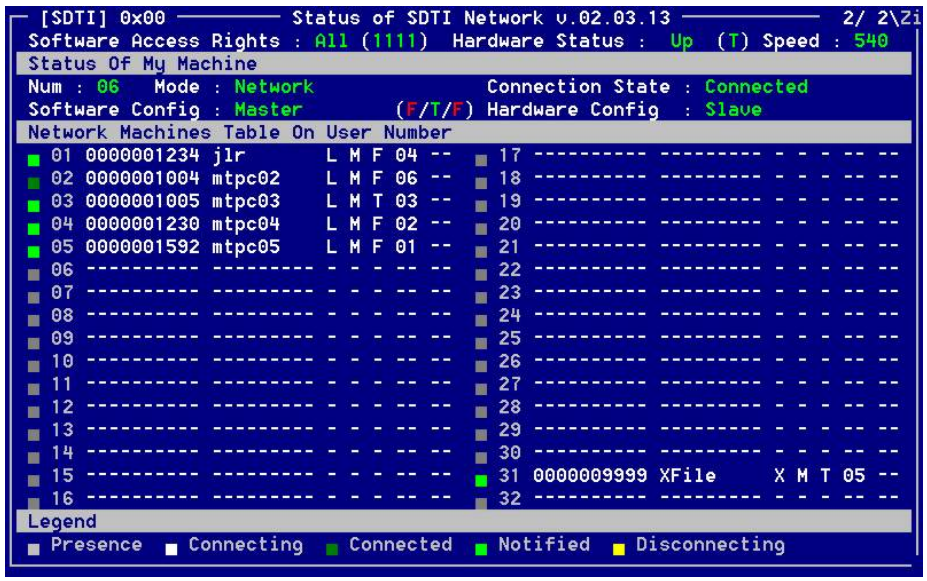
This function calls the Video Delay VGA screen. Refer to the Chapter 8 ‘Video Delay’, on page 35.

F8: Search

This option calls the VGA Search Screen. Refer to the Chapter 10 ‘Keyword Management’, on page 71 for more details.

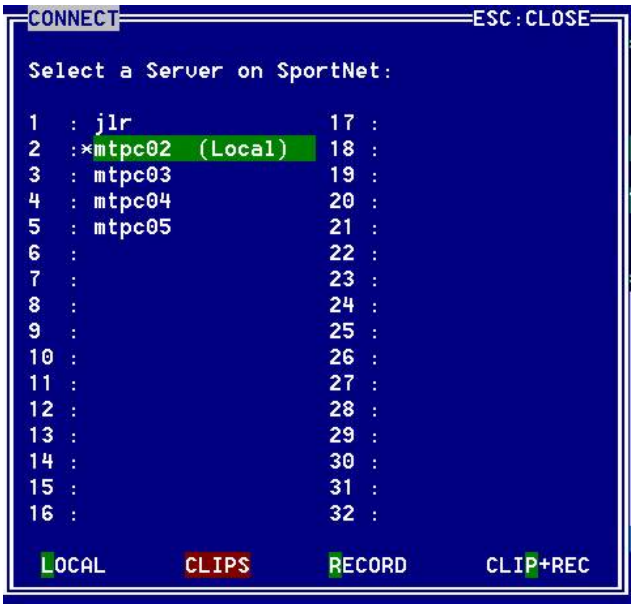
SHIFT+F8: Net

This option switches to the Network Status Screen and allows monitoring the status of the different machines connected on the network.


[SDTI] 0x00 Status of SDTI Network v.02.03.13 2/ 2\Zi
Software Access Rights : All (1111) Hardware Status : Up (T) Speed : 540
Status Of My Machine
Num : 06 Mode : Network Connection State : Connected
Software Config : Master (F/T/F) Hardware Config : Slave
Network Machines Table On User Number
01 0000001234 jlr L M F 04 --
02 0000001004 mtpc02 L M F 06 --
03 0000001005 mtpc03 L M T 03 --
04 0000001230 mtpc04 L M F 02 --
05 0000001592 mtpc05 L M F 01 --
31 0000009999 XFile X M T 05 --
Legend
Presence Connecting Connected Notified Disconnecting

F9: Connect

This option calls the CONNECT window. This window allows the operator to connect to the clips and record trains of other machines on the network.



The following functions can be used in the CONNECT window:

ALT+L: return to LOCAL mode and close the CONNECT window

ALT+C: CLIPS mode - to connect to the clips of a remote machine

ALT+R: RECORD mode - to connect to the record trains of a remote machine

ALT+P: CLIP+REC mode - to connect to the clips and record trains of a remote machine.

After selecting CLIP, RECORD or CLIP+REC mode either with the keyboard or by clicking with the stylus, select the machine you want to connect to: click on it with the stylus, or move with the arrow keys and press **ENTER** on the keyboard.

Pressing ALT+L or clicking with the stylus on “LOCAL” will close the CONNECT window and return to local clips and record trains.

To close the CONNECT window without changing the connection mode or remote machine, press **ESC**.

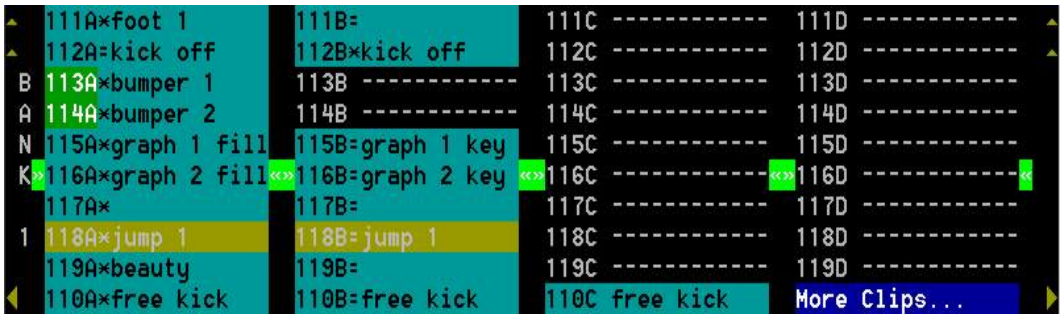
The “*” next to one of the machine in the list indicates which machine is the active network server. Refer to the Chapter 13 ‘Operating on XNet Network’, on page 148 for details.

F0: Playlist

The Playlist screen can be accessed by selecting **F10** on the keyboard.

9.3.4 The Clip Information Area

The next area is the Clip Information Area which displays the clips of the selected page and bank(s). Two clips' banks are displayed at a time.



For each clip and camera angle, the following information is available:

Field	Description
Clip ID	Unique identifier of the clip on the server. Ex: 111A The clip ID is followed by the "Creating" message when the clip is in the process of being created, copied or moved to this location. For more information on growing clips, refer to the section 9.2.5 'Recall and Playback of Growing Clips', on page 41
Clip "rank"	Clip rank depending on the channel on which it has been created : • Primary ("*" next to the clip ID) • Secondary ("=" next to the clip ID) The clip rank information is highlighted in blue if the clip is protected.
Clip name	Name of the clip, either automatically assigned or defined by the user.
Archive Status	• if the clip ID is blinking green, the clip is flagged for archiving, but not yet archived • if the clip ID is permanently highlighted in green, the archiving of the clip has been completed

Note

In the standard view (cameras A to D), if camera E and/or F exist for a particular clip, the D-column for this clip is replaced by the mention "**More Clips**" on blue background.

9.3.5 The Clip Management Area

Name Capture Field

This is the only capture area of the screen. It is used to enter the name to assign to a clip/playlist, or to enter the ID of a clip to recall.

Mode Field

It indicates if the clip screen is currently in CLIP or CAM mode. In CLIP mode, actions on a clip will use all available cameras for this clip. In CAM mode, actions on a clip will only use the selected camera for this clip. Default value is CAM mode.

Clip Control Area

It is dedicated to play-out control.

Command	Description
ALT+P:►/■	Plays at 100% speed except for super motion clips which are played back at 33% speed; and pause playback on the current picture.
ALT+R:RECUE	Jumps to the Short IN point.Primary.
ALT+T: SET TC	Restripes the timecode of the current clip.
ALT+Z:>ARCHIVE	Allows the operator to flag a clip to place it in the archive queue of the XFile[1] defined in the Operational Setup menu (p.7.1 F1) or in the Setup screen. When a clip is flagged for archiving, but has not yet been archived, its ID will be blinking green in the Clip screen. It is permanently highlighted green when the archiving of the clip is completed. Depending on the mode selected with the **F2** key (CLIP/CAM), the **>ARCHIVE** flag is assigned only to the camera angle of the clip selected with the green cursor (CAM mode), or to all camera angles of the clip (CLIP mode).
PGM X	Located in the bottom right corner of the clip screen, this field is only visible if the **Call channel VGA** function has been enabled in the Operational Setup menu (p.9.2 F4) or in the Setup Screen, and is only effective in CAM mode, not in CLIP mode. It allows the operator to select on which channel clips called using the keyboard/tablet and VGA should be loaded. Press **ALT+F1** on the keyboard to select PGM1, **ALT+F2** for

[1] The EVS Xfile is a 2U device with 2 removable hard drives, that can be connected to the XNet SDTI network. Clips can be archived to/restored from the removable media.

PGM2/PRV, **ALT+F3** for PGM3, etc. This function is useful to load clips on channels that cannot be controlled by an EVS Remote Panel, or to allow an AP to browse clips on a play channel not used by the main operator. Note that if that channel is in PLST EDIT mode with a PRV, the clip will automatically cue up on the PRV.

9.3.6 Selecting a Clip with Tablet and Stylus

To select a different page or bank using the stylus, click on the desired page/bank number on the bottom line of the screen. You can also move to the adjacent page/bank by clicking on the red arrows on the top, bottom and sides of the screen:

- left/right arrow: go to previous/next page
- up/down arrow: go to previous/next bank

If a clip is present in a certain location, it will be highlighted in blue. Once selected, it will be highlighted in orange.

To cue up a clip on the primary channel controlled by the first remote, or on the VGA Call Channel defined in the setup, simply click[1] on it with the stylus. If the channel where the clip is supposed to be loaded is in Plst Edit mode with a PRV channel attached, the clip will automatically cue up on the PRV channel.

9.3.7 Selecting a Clip with the Keyboard

The keyboard can also be used to operate within the clip screen. The green arrows surrounding a clip show the current cursor position. The arrow keys (↑,↓,←,→) on the keyboard are used to move across the screen. Only 2 banks can be viewed at a time.

To view other banks, use ALT+↑,↓ to scroll vertically between banks and use ALT+←,→ or **PgDn, PgUp** to scroll horizontally between pages. To go to bank 1 of the current page, use the **HOME** key and to go to the Playlist bank of the current page, use the **END** key[2].

Once the cursor located on the desired clip, press **ENTER** to cue up the clip on the primary channel controlled by the first remote, or on the VGA Call Channel defined in the setup. If the channel where the clip is supposed to be loaded is **in Plst Edit** mode with a PRV channel attached, the clip will automatically cue up on the PRV channel.

If the Clip screen is connected to the clips and playlists of a remote machine, pressing ALT+L will return the screen immediately to the local clips and playlists.

[1] "Clicking with the stylus" means pressing lightly the tip of the stylus onto the tablet.
[2] Trying to access the playlist bank of page 10 will cause the Clip screen to jump to the playlist bank of page 9, since page 10 playlists are reserved for external protocols.

9.3.8 How to Name a Clip

To name a clip, proceed as follows:

1. In the Clip screen, select the clip to name in one of the following ways:

   a. Click on the clip with the stylus

   b. Position the green arrows around the desired clip with the keyboard.

2. Type in the desired name with the keyboard. All characters available from the keyboard are accepted, including blanks.
3. Press **F1**:

   a. In CAM mode, only the camera where the cursor is located is named.

   b. In CLIP mode, all cameras of the clip where the cursor is located are named.

The entry in the **Name** field is not cleared by pressing **F1** and remains for future use. Press <**BACKSPACE**> to delete the last character in the Name field, or press **ESC** to clear the whole field.

Note

To be able to name/rename clips on a network machine, the **Clip edit by Network** parameter in the **Operational Setup** menu (P.5.1 F2) of the remote machine must be set to “Yes”. If you are unable to name a network clip, please check this setting on the remote machine.

9.3.9 How to Change the Primary Camera of a Clip

To change the primary camera of a clip, proceed as follows:

1. In the Clip screen, move the cursor to the desired camera.
2. Press **F4** on the keyboard or click with the stylus on the corresponding area in the Function bar.

   → This camera becomes the new primary camera.
   → If the selected camera is a secondary camera (indicated by “=”), it becomes the primary camera and the previous primary camera becomes the secondary camera.

9.3.10 Recalling a Clip

How to Call a Clip Belonging to the Machine You Are Connected to

The machine to which you are connected is indicated on the left side of the Title Bar.

To call a clip belonging to the machine you are connected to, proceed as follows:

1. Type either the 3 or 4 digits of the ID. Ex: 111 or 111A. The entry appears in the Name field.
2. Press **F3**
   - If only 3 digits are entered, the primary camera is selected
   - If 4 digits are entered, the clip is selected according to the given camera angle.
   - If no clip matches the entry, no selection is done.

Note

ESC key can still be used at any time to clear the Name field.

How to Call a Clip Belonging to Another Machine Than the One You Are Connected to

To call a clip belonging to another machine than the one you are connected to, proceed as follows:

1. Type either the first 3 or 4 digits of the ID, followed by a "/" and the network number of the machine. Ex: 111/03 or 111A/03. To call a local clip, no matter what machine you are connected to, type 00 as network number. Ex: 111/00 or 111A/00.
2. Press **F3**.

9.3.11 How to Cancel a Network Copy on the VGA

Select the clip and press the CTRL+DELETE keys. A confirmation screen comes up. "Cancel network copy? **ESC**: Do not cancel copy - **ENTER**: Cancel copy"

If the **Copy Clip** option copies several cams of the same clip and some of them have already been copied before the Cancel function, the Cancel does not delete the copied files, it just cancels the cam(s) that are still copying or to be copied of that clip. It does not cancel the copying of other clips.

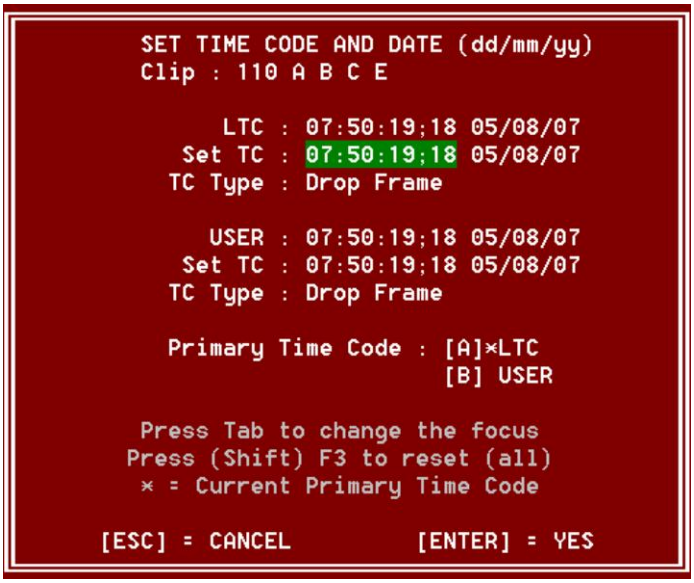
The Cancel function remains possible even if the page where the clip is being copied is protected.

9.3.12 How to Restripe the Timecode of the Current Clip

To restripe the timecode of the current clip, proceed as follows:

1. Recall the clip by moving the cursor on the desired clip and pressing **ENTER**, or by clicking on it with the stylus.
2. Press **ALT-T** on the keyboard to call the SET TC function.

   The Set Timecode screen is displayed (without TC Type field with PAL – refer to note below):


SET TIME CODE AND DATE (dd/mm/yy)
Clip : 110 A B C E
LTC : 07:50:19;18 05/08/07
Set TC : 07:50:19;18 05/08/07
TC Type : Drop Frame
USER : 07:50:19;18 05/08/07
Set TC : 07:50:19;18 05/08/07
TC Type : Drop Frame
Primary Time Code : [A]×LTC
[B] USER
Press Tab to change the focus
Press (Shift) F3 to reset (all)
× = Current Primary Time Code
[ESC] = CANCEL
[ENTER] = YES

3. If you want to modify the LTC timecode and date, type in the new timecode for the Short IN point and date of the clip in the **Set TC** field below the LTC field.
4. If you want to modify the user-defined timecode and date, type in the new timecode for the Short IN point and date of the clip in the **Set TC** field below the **USER** field.
5. If you want to modify the primary TC for this clip, press the **A** or **B** key which corresponds to the requested primary TC.
6. Press **F2** to select CAM or CLIP mode
   - In CAM mode, only the timecode of the camera angle loaded on the primary channel will be changed.
   - In CLIP mode, the timecode of all camera angles of the clip will be changed.
7. Press **ENTER** to confirm or **ESC** to cancel.

The entire clip is updated according to the new timecode value so that the timecode remains continuous inside the whole clip.

Note

In 59.94Hz modes (NTSC), you can also select between DROP FRAME and NON DROP FRAME modes by pressing the space bar.

9.3.13 Moving and Copying Clips

Copying and moving clips in the VGA are performed using the CUT, COPY and PASTE functions.

General Principles

- If the clipboard was filled using the **Cut** function, the original clip(s) is/are deleted after being pasted to the new location.
- In CAM mode, only the selected camera of the clip is **Cut/Copied/Pasted**. In CLIP mode, all camera angles of the clip are **Cut/Copied**.
- For the **Paste** function in CLIP mode, only the available camera locations inside the destination clip will be pasted. If some camera angles already exist for the destination clip, these will not be overwritten by the corresponding camera in the clipboard.
- A "**Cut & Paste**" of a clip is equivalent to a "Move Clip", meaning that any reference to that clip inside playlists will be updated to the new location of that clip. This is not the case when doing a "**Copy & Paste**", then deleting manually the original clip.

Clipboard Field

This area displays the content of the clipboard: clip number, network number if the copied clip/playlist is a remote clip/playlist, and the selected camera(s) for a clip.

The rest of the line summarizes the available functions (copy, cut, paste, delete) and their keyboard shortcuts. These functions can also be called by clicking on the corresponding area on this line.

CTL+X: CUT

This command is only applicable to clips.

1. Move the cursor to the clip to "cut" from the Clip screen
2. Press CTRL+X on the keyboard or click on the corresponding area on the screen.

The clip removed from the current location and copied to the clipboard.

CTL+C: COPY

1. Move the cursor to the clip/playlist to copy
2. Press CTRL+C on the keyboard or click on the corresponding area on the screen.

The clip is copied to the clipboard.

CTL+V: PASTE (Long Copy)

With the Long copy, the entire original clip is copied, including its guardbands, to the destination.

1. Move the cursor to the clip/playlist location where the content of the clipboard should be copied.

2. Press CTRL+V or click to the corresponding area on the screen.

The clip in the clipboard is copied to the selected location in **Long** mode.

CTL+SHIFT+V: PASTE (Short Copy)

With the Short copy, the material between the Short IN and Short OUT points of the original clip is copied, augmented by the duration of the default guardbands. This allows saving space on the EVS server.

1. Move the cursor to the clip/playlist location where the content of the clipboard should be copied.
2. Press CTRL+SHIFT+V.

The clip in the clipboard is copied to the selected location in **Short** mode.

CTL+DEL: DELETE

1. Move the cursor to the clip/playlist to delete.
2. Press CTRL+DEL or click on the corresponding area on the clip screen.

   → In CAM mode, only the camera selected is deleted

   → In CLIP mode, all cameras of the clip are deleted.

Important

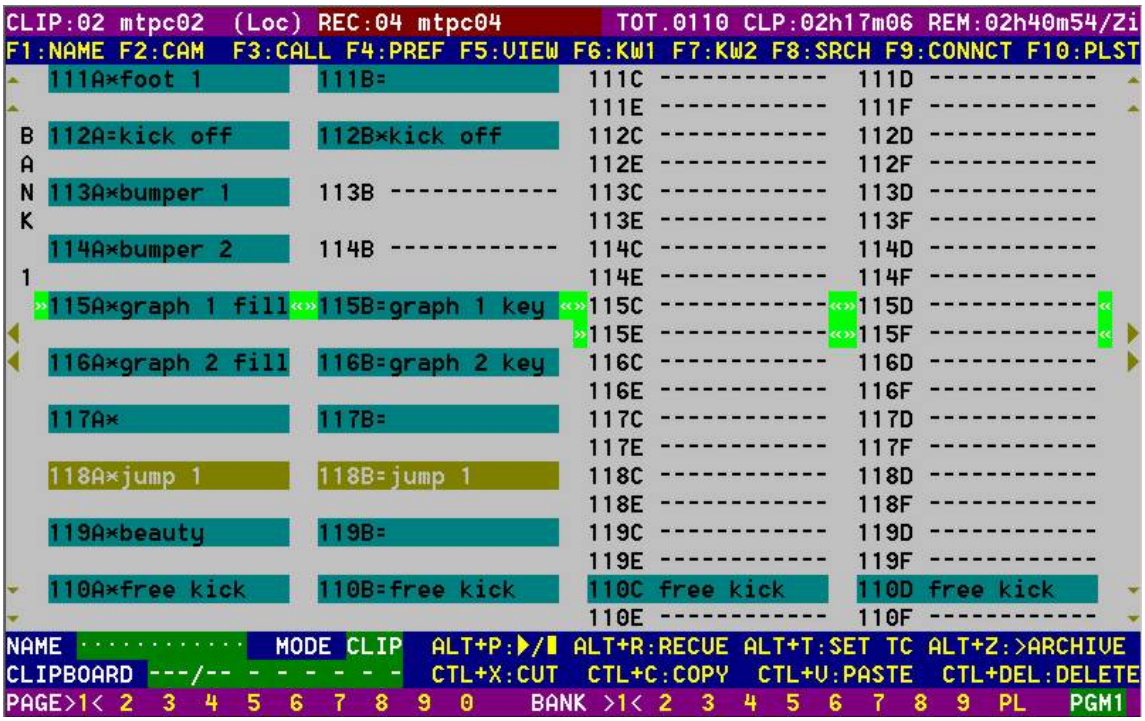
A clip/playlist cannot be deleted while it is on air.

Note

- When a clip is deleted, all playlists are scanned and that clip is removed from all of them.
- When a clip is protected, or when the **Confirm del clp/plst** is set to “Yes” in the **Operational Setup** menu (p.5.1 F3), a confirmation is required to delete the selected clip(s).

9.3.14 Clip Screen - Extended View

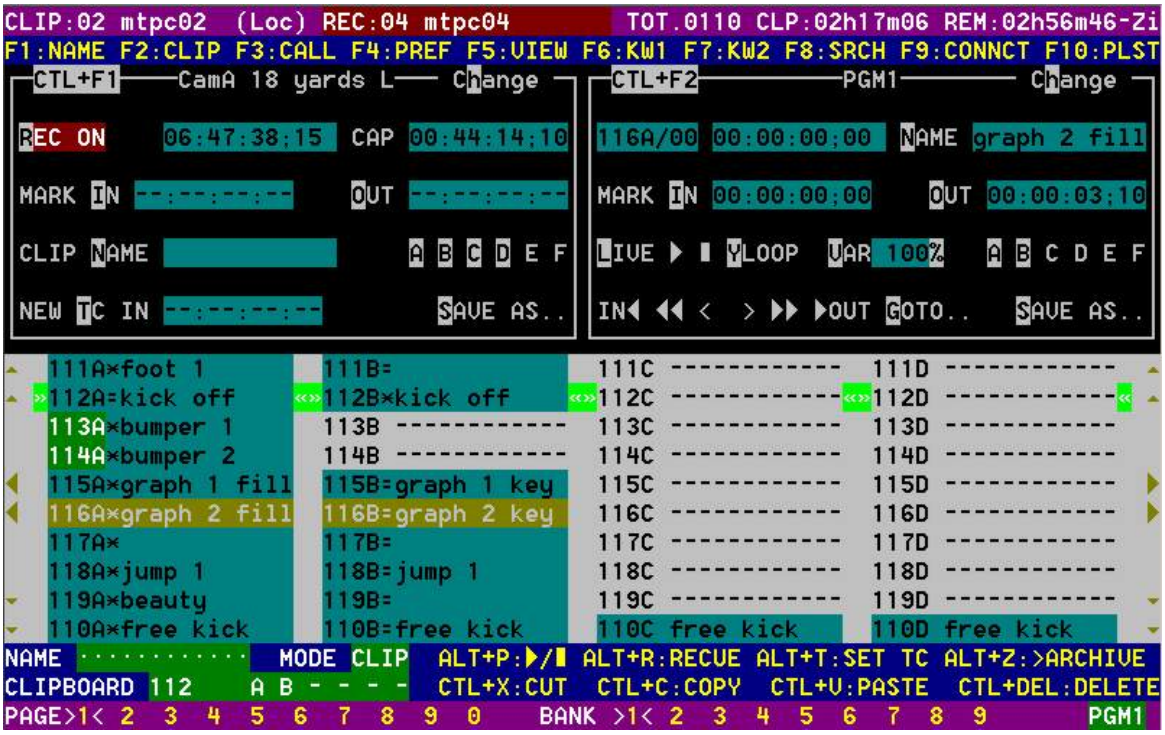
The extended view shows cameras A to F instead of A to D. Only 1 bank can be viewed at a time. The switch between standard and extended view is done by pressing **F5** on the keyboard or by clicking on the “F5:VIEW” area on the screen.



9.4 Using the VDR Panel

The VGA VDR Panel is accessed from any VGA screen by pressing SHIFT+F9 on the keyboard. The lower section of the VDR Panel is similar to the clip screen, with the same functions. The upper section of the VDR Panel features two windows that can each take control of one channel of the server.

Pressing SHIFT+F9 in the VDR Panel returns the VGA to the Clip screen mode.



9.4.1 VDR Panel - Lower Section

The browsing of clips, the viewing modes (normal or extended), the way clips are recalled, moved and copied, etc. in the VDR Panel is strictly the same as in the Clip screen. The Connect window is called with **F9**, and allows to connect to other servers on the network.

9.4.2 VDR Panel - Upper Section

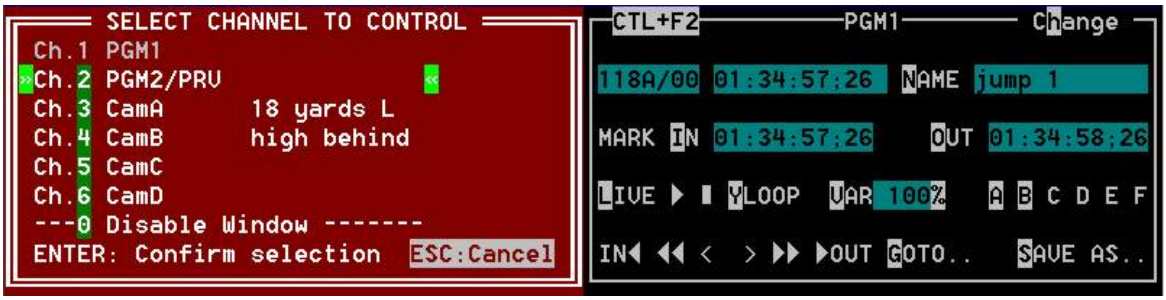
The two windows of the upper section can be assigned to a different channel of the server. When entering the VDR Panel for the first time after starting the application, the control of both windows is disabled.

Press CTRL+F1 to gain control of the left window, or CTRL+F2 to gain control on the right window. The frame around the corresponding window becomes green. Note that only one window can be active at a time. Inside the active window, letters/numbers highlighted in green indicate the keyboard shortcut to the corresponding function: press ALT+the highlighted letter/number. All functions are also available by clicking with the stylus.

Important

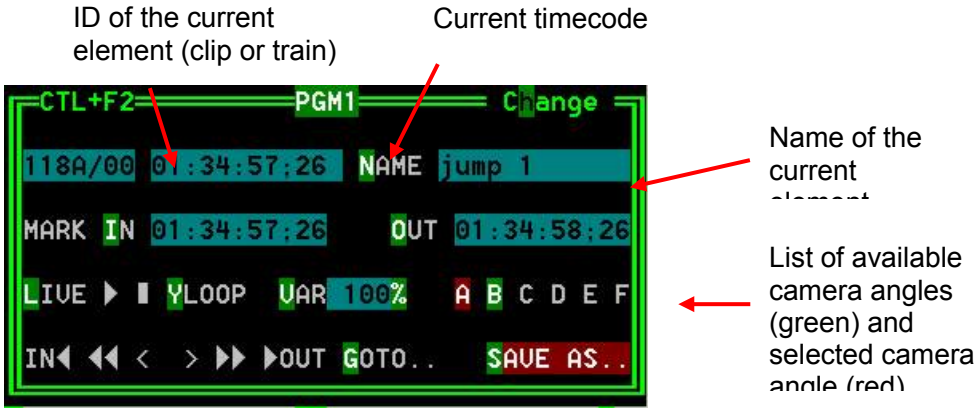
The control of a channel from the VDR Panel is concurrent to any other controller that might be assigned to that channel: EVS Remote Panel or external protocol. A command sent from the VDR Panel to a channel will overwrite whatever the channel was doing at that time.

The name of the channel currently assigned to each window is displayed on the top of each of them. To assign a new channel to this window, press ALT+H. A new window appears on the other side to allow the selection of a new channel.


SELECT CHANNEL TO CONTROL
Ch.1 PGM1
»Ch.2 PGM2/PRV «
Ch.3 CamA 18 yards L
Ch.4 CamB high behind
Ch.5 CamC
Ch.6 CamD
---0 Disable Window -------
ENTER: Confirm selection ESC:Cancel
CTL+F2 PGM1 Change
118A/00 01:34:57:26 NAME jump 1
MARK IN 01:34:57:26 OUT 01:34:58:26
LIVE YLOOP VAR 100% A B C D E F
IN OUT GOTO.. SAVE AS..

Use the ↑/↓ arrow keys to select the channel and press **ENTER**, or directly press **ALT**+the number of the channel as highlighted in green. The Play channels already assigned appear in grey and cannot be selected. Select "0 – Disable Window" if you don't want to assign any channel to the window. Depending whether a Play or Record channel is assigned to the VDR Panel window, its content is automatically updated.

9.4.3 VDR Panel - Player Window


ID of the current element (clip or train)
Current timecode
CTL+F2 PGM1 Change
118A/00 01:34:57:26 NAME jump 1
MARK IN 01:34:57:26 OUT 01:34:58:26
LIVE YLOOP VAR 100% A B C D E F
IN OUT GOTO.. SAVE AS..
Name of the current
List of available camera angles (green) and selected camera

How to Load a Record Train

Press ALT+L to go in LIVE mode (or click on the LIVE function), then press **ALT**+the letter of the desired record train (A/B/C/D/E/F), or click on it. The letters corresponding to the available record trains are highlighted in green, and the letter of the current record train in red.

How to Load a Clip

Use the arrow keys to move the cursor inside the lower section of the VDR Panel to the desired clip and press **ENTER**, or click on the desired clip with the stylus, or type the desired clip ID and press **F3**. To select a different camera angle inside a clip, press **ALT**+the letter of the desired camera (A/B/C/D/E/F), or click on it. Available camera angles are highlighted in green, the current camera angle in red.

Playing/Browsing the Current Element

Command	Description
ALT+P	Play from / Pause on the current picture
ALT+Y	Play the current clip in endless loop mode. The play will start from the current picture until the Short OUT point of the clip, then will automatically loop back to the Short IN point and keep playing, and so on…
ALT+V	PlayVar at the speed specified in the adjacent field. To edit the Var speed, press ALT+% (without **SHIFT** key), type the desired value and press **ENTER** to confirm.
< / > (without SHIFT key):	Move 1 field backward / forward
SHIFT+< / >	Move 1 second backward / forward
CTRL+< / >	Fast Rewind+Fast Forward. The browsing will continue after the keys are released.
ALT+< / >	Goto IN / OUT
ALT+G	Goto timecode

How to Create a Clip with the VDR Panel Player

To create a clip with the VDR Panel Player, proceed as follows:

1. Load a record train on the player
2. Browse the record train to reach the desired Short IN or Short OUT point and press ALT+I / ALT+O to mark the Short IN / Short OUT points on the current picture. The cursor is automatically placed in the adjacent field, so that the operator can manually enter the timecode of the desired Short IN / OUT point if needed[1]. Press **ENTER** to confirm or **ESC** to cancel.
3. Repeat this operation for the complementary Short IN / Short OUT points. This is not mandatory. If only a Short IN or a Short OUT point is marked, the **Default clip duration** defined in the **Operational Setup** menu (p.2.2 F2) will be used to define the missing point.

[1] If the operator knows the timecode of the IN / OUT point, he does not need to browse to that picture. He can press ALT+I on any picture, then enter the timecode of the IN / OUT point and confirm with **ENTER**.

4. Press ALT+S to save the clip. The Save as window opens, giving the operator the opportunity to name / rename the clip if needed. Pressing **ENTER** will save the clip to the current cursor location in the lower section of the VDR Panel. When the Save as window is open, the operator still has the possibility to browse the database, select a different page and bank, and even connect to another machine on the network using the Connect window. Pressing ALT+U will save the clip to the first available clip location[1] in the current server.

Editing a Clip with the VDR Panel Player

After loading the desired clip, the following functions are available:

Command	Description
ALT+N	Renames the clip. Type the desired name and press **ENTER** to confirm or **ESC** to cancel.
ALT+I / ALT+O	Marks a new Short IN / Short OUT point on the current picture. The cursor is automatically placed in the adjacent field, so that the operator can manually enter the timecode of the desired Short IN / Short OUT point if needed. Press **ENTER** to confirm, or **ESC** to cancel.

How to Copy a Clip with the VDR Panel Player

To copy a clip with the VDR Panel Player, proceed as follows:

1. Load the original clip
2. Press ALT+S to save the current clip to another location.

   This will create a copy of the clip.

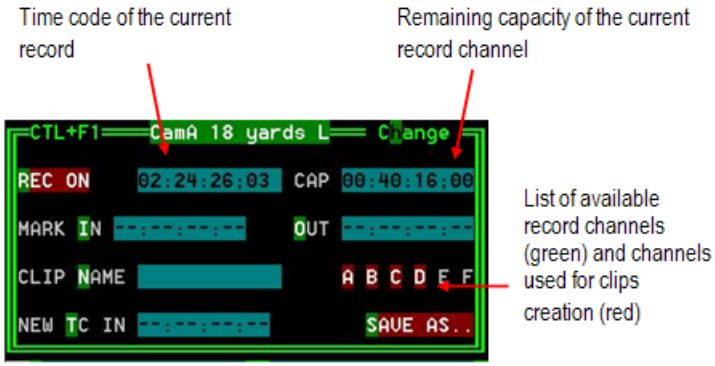
The operator has the opportunity to rename the clip during this operation. He can then save the clip to the current cursor location by pressing **ENTER**, or to the first available clip location on the current server by pressing ALT+U.

Note

The Cut / Copy / Paste functions are available at any time to move and copy clips in the lower section of the VDR Panel, even when one of the upper windows is active.

[1] The first available clip location is the first one where no camera angle is already present.

9.4.4 VDR Panel - Recorder WINDOW



The VDR Panel Recorder can be used to start/stop the record, and to create clips from the local record trains. For example, it allows the creation of clips on a server that has no Play channel.

How to Start/Stop the Record

Press ALT+R to start or stop the record on the record channel assigned to the window. No confirmation is required.

Important

In LSM mode, all recorders will be stopped at once to keep the synchronization between all record channels.

How to Create a Clip with the VDR Panel Recorder

To create a clip with the VDR Panel Recorder, proceed as follows:

1. Press ALT+I / ALT+O to mark a Short IN / Short OUT point on the last recorded picture.

   The timecode appears in the adjacent field, and the cursor is automatically placed on that field to allow the operator to edit the timecode of the Short IN / Short OUT point if desired. Press **ENTER** to confirm or **ESC** to cancel.

2. Repeat this operation for the complementary Short IN / OUT point.

   This is not mandatory. If only a Short IN or a Short OUT point is marked, the **Default clip duration** defined in the Operational Setup menu (p.2.2 F2) will be used to define the missing point.

3. Select from which record train(s) the clip(s) must be created: press **ALT**+the letter (A/B/C/D/E/F) of a record train to select / de-select it.

   Letters highlighted in RED means that a clip will be created from the corresponding record train; letters highlighted in green means that the corresponding record train is available but will not be used to create a clip.

4. Define the name of the clip before saving it: press ALT+N, type the desired name and validate with **ENTER**.

5. The operator can also restripe the timecode of the IN point of the clip to a new value. Press ALT+T, type the desired value and confirm with **ENTER**. When creating the clip, this timecode will replace the original timecode of the Short IN point.
6. Press ALT+S to save the clip(s). The operator still has the opportunity to rename the clip during this operation. He can then save the clip to the current cursor location by pressing **ENTER**, or to the first available clip location on the current server by pressing ALT+U.

10. Keyword Management

Each clip of the server can be assigned 3 keywords and a ranking. Values for ranking are: -, *, **, ***. The keywords are selected from a user defined keywords file that can contain up to 200 keywords of 12 characters.

This information (keywords, ranking) can then be combined with other criteria (timecode, dates) to search the server's database for matching clips.

The keyword and ranking assignment, and the Search functions, can be performed using the EVS Remote Panel or the VGA screen and PC keyboard. These functions are only available if license codes 124 (database search functions) and 125 (keyword assignment functions) are installed on the server.

10.1 Creating and Selecting the Keyword File

The keyword file is a simple text file with a name of 8 characters and a .KWD extension. All keyword files must be located in the Multicam\KWD directory of the server. A sample keyword file (SAMPLE.KWD) is provided by EVS when Multicam is installed. The content of a keyword file is similar to the following:

```
1 = action_1
2 = action_2
3 = action_3
4 = action_4
5 = action_5
6 = action_6
7 = action_7
8 = action_8
9 = action_9
10 = action_10
11 = action_11
12 = action_12
13 = action_13
14 = action_14
15 = action_15
16 = action_16
17 = action_17
18 = action_18
19 = action_19
20 = action_20

21 = player_A1
22 = player_A2
23 = player_A3
24 = player_A4
25 = player_A5
26 = player_A6
27 = player_A7
28 = player_A8
29 = player_A9
30 = player_A10
31 = player_A11
32 = player_A12
33 = player_A13
34 = player_A14
```

```
35 = player_A15
36 = player_A16
37 = player_A17
38 = player_A18
39 = player_A19
40 = player_A20

41 = player_B1
42 = player_B2
43 = player_B3
44 = player_B4
45 = player_B5
46 = player_B6
47 = player_B7
48 = player_B8
49 = player_B9
50 = player_B10
51 = player_B11
52 = player_B12
53 = player_B13
54 = player_B14
55 = player_B15
56 = player_B16
57 = player_B17
58 = player_B18
59 = player_B19
60 = player_B20
…etc… until 200 = last
keyword
```

Each keyword can have up to 12 characters, including blanks. Avoid accentuated and special characters since most of them will not be recognized by the Multicam application. If a keyword is longer than 12 characters, only the first 12 characters will be used and the end of the keyword will automatically be truncated.

10.1.1 Creating the Keyword File from a PC

Creating a keyword file can be done on any PC with a simple text editor. Make sure the file name does not exceed 8 characters, that all characters in the file name are legal, and that it has a .KWD extension. The file can then be imported from a floppy disk onto the server, either manually from the DOS, or by using the **Import/Export Keywords Files** from the EVS Maintenance menu (refer to the “XT Technical Reference” for more details about this option).

10.1.2 Selecting the Current Keyword File

In the Multicam application, the `Keyword` file can be selected either from the VGA Setup screen, or from the **Operational Setup** menu of the Remote Panel using the **Keyword file** parameter (p.6.1 F1).

The operator can select any file from all the .KWD files present in the `Multicam\DIRECTORY`. If the machine is connected to other systems on the EVS SDTI network, the network server will automatically distribute its current `Keyword` file to all other users on the network.

For each system on the network, the operator can choose to work with the file coming from the network server (set the `Keyword` file parameter to “SERVER”), or with a local file.

Note

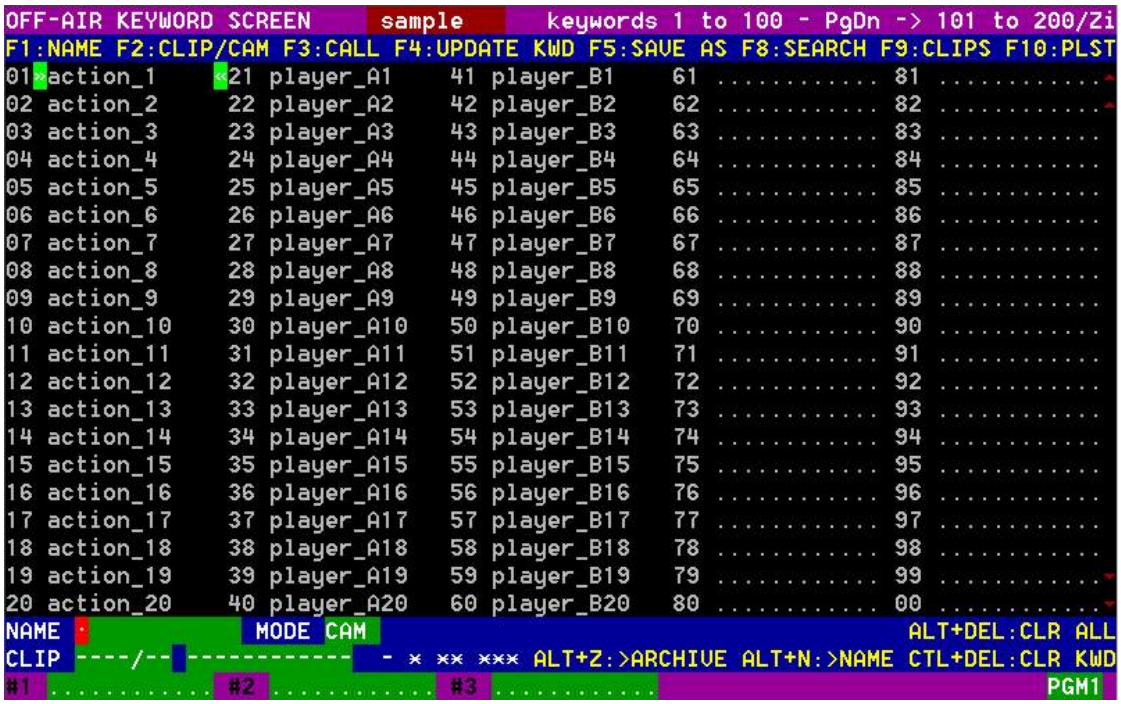
In a normal situation, the network server is the machine that has been defined as such in the EVS Configuration menu.

However, if for any reason the network has been interrupted or the machine designated as the network server is not available, another machine on the network (the Master machine with the highest serial number) will automatically take over this job, including the distribution of the `Keyword` file. Even if the original network server reconnects, it will not necessarily become the actual network server again.

The machine that actually assumes the role of network server can easily be identified from the Connect window on the VGA or from the Network menu on the EVS Remote Panel, thanks to the “`*`” displayed next to its name. That machine only has the ability to distribute its current `Keyword` file to the others on the SDTI network.

10.1.3 Editing the Keyword File from the Multicam Application

The `Keyword` file can also be edited directly in the Multicam application using the Off-Air Keyword screen (**F7**). This screen is also used to assign keywords to a clip, but the keyword assignment functions will be described further in this chapter.


OFF-AIR KEYWORD SCREEN sample keywords 1 to 100 - PgDn -> 101 to 200/Zi
F1:NAME F2:CLIP/CAM F3:CALL F4:UPDATE KWD F5:SAVE AS F8:SEARCH F9:CLIPS F10:PLST
01 action_1 21 player_A1 41 player_B1 61 81
02 action_2 22 player_A2 42 player_B2 62 82
03 action_3 23 player_A3 43 player_B3 63 83
04 action_4 24 player_A4 44 player_B4 64 84
05 action_5 25 player_A5 45 player_B5 65 85
06 action_6 26 player_A6 46 player_B6 66 86
07 action_7 27 player_A7 47 player_B7 67 87
08 action_8 28 player_A8 48 player_B8 68 88
09 action_9 29 player_A9 49 player_B9 69 89
10 action_10 30 player_A10 50 player_B10 70 90
11 action_11 31 player_A11 51 player_B11 71 91
12 action_12 32 player_A12 52 player_B12 72 92
13 action_13 33 player_A13 53 player_B13 73 93
14 action_14 34 player_A14 54 player_B14 74 94
15 action_15 35 player_A15 55 player_B15 75 95
16 action_16 36 player_A16 56 player_B16 76 96
17 action_17 37 player_A17 57 player_B17 77 97
18 action_18 38 player_A18 58 player_B18 78 98
19 action_19 39 player_A19 59 player_B19 79 99
20 action_20 40 player_A20 60 player_B20 80 00
NAME
MODE CAM
ALT+DEL:CLR ALL
CLIP ----/--
- * ** *** ALT+Z:>ARCHIVE ALT+N:>NAME CTL+DEL:CLR KWD
#1
#2
#3
PGM1

Select a local `Keyword` file from the Setup. If you select “SERVER” as `Keyword` file in the setup, i.e. the file distributed by the network server, you will not be allowed to edit it.

Go to the Off-Air Keyword Screen by pressing **F7** on the keyboard. If you want to create a backup copy of the current file, press **F5:SAVE AS** in that screen (or click on the function with the stylus) and enter the name of the file you want to create. This can also be used to create a local copy of the keywords file distributed by the Network Server.

Note

If a .KWD file with the same name already exists in the KWD directory, it will automatically be overwritten by the new file.

To edit a keyword in the current file, move the cursor to the desired keyword location, using either the arrow keys or the stylus, then type the new keyword. This one will appear in the Name field at the bottom of the screen. Press **ESC** to clear the whole field or **<BACKSPACE>** to delete the last character. To apply the value entered in the name field to the selected keyword, press **F4:UPDATE KWD**, or click on that function with the stylus.

Repeat this operation for all keywords to update.

Press **PgU/PgDn** to toggle between Page 1 (keywords 1 to 100) and Page 2 (keywords 101 to 200), or click on the Up/Down red arrows on the right side of the screen.

If your machine is the actual Network server, the updated file is automatically sent to all other users on the network every time a keyword is updated.

10.2 Assigning Keywords using the VGA Screen

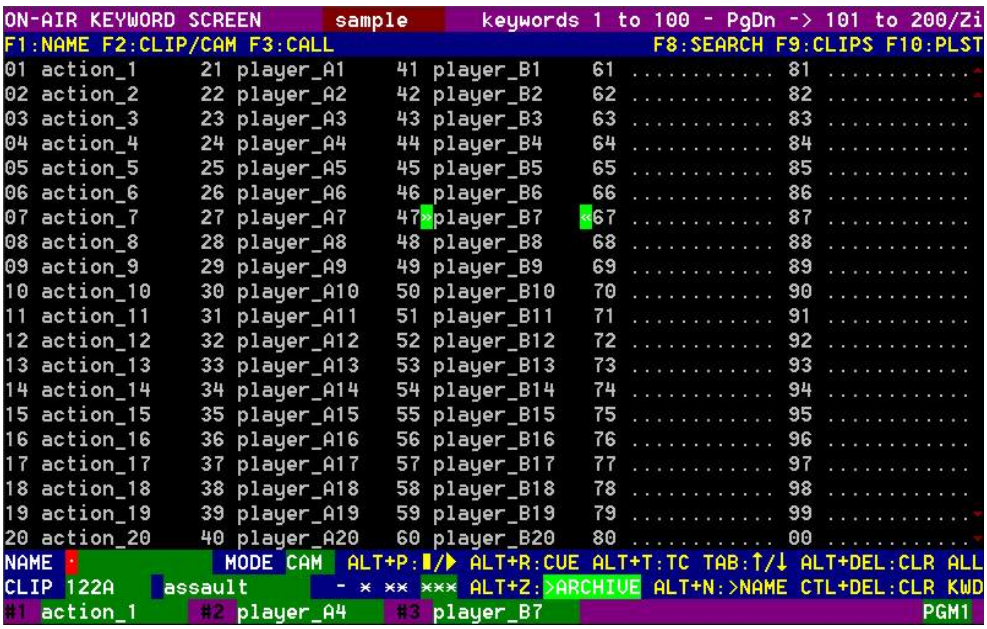
10.2.1 Keyword Windows

Keywords can be assigned to clips using the On-Air Keyword screen (**F6:KW1**), or the Off-Air Keyword screen (**F7:KW2**).

The On-Air Keyword screen is used to assign keywords to the clip loaded on the primary channel of the 1st user, meaning that a play channel is used during this operation.

The Off-Air Keyword screen is used to assign keywords to the clip selected with the green arrows in the Clip screen or in the VDR Panel, even if this clip is not loaded on any play channel. This can be useful to allow someone to assist the main operator for logging operations, without taking any play channel from the system

The operation of both On-Air and Off-Air Keyword screens is entirely similar.


ON-AIR KEYWORD SCREEN sample keywords 1 to 100 - PgDn -> 101 to 200/Zi
F1:NAME F2:CLIP/CAM F3:CALL F8:SEARCH F9:CLIPS F10:PLST
01 action_1 21 player_A1 41 player_B1 61 81
02 action_2 22 player_A2 42 player_B2 62 82
03 action_3 23 player_A3 43 player_B3 63 83
04 action_4 24 player_A4 44 player_B4 64 84
05 action_5 25 player_A5 45 player_B5 65 85
06 action_6 26 player_A6 46 player_B6 66 86
07 action_7 27 player_A7 47 player_B7 67 87
08 action_8 28 player_A8 48 player_B8 68 88
09 action_9 29 player_A9 49 player_B9 69 89
10 action_10 30 player_A10 50 player_B10 70 90
11 action_11 31 player_A11 51 player_B11 71 91
12 action_12 32 player_A12 52 player_B12 72 92
13 action_13 33 player_A13 53 player_B13 73 93
14 action_14 34 player_A14 54 player_B14 74 94
15 action_15 35 player_A15 55 player_B15 75 95
16 action_16 36 player_A16 56 player_B16 76 96
17 action_17 37 player_A17 57 player_B17 77 97
18 action_18 38 player_A18 58 player_B18 78 98
19 action_19 39 player_A19 59 player_B19 79 99
20 action_20 40 player_A20 60 player_B20 80 00
NAME MODE CAM ALT+P:▮/▶ ALT+R:CUE ALT+T:TC TAB:↑/↓ ALT+DEL:CLR ALL
CLIP 122A assault - x xx xxx ALT+Z:>ARCHIVE ALT+N:>NAME CTL+DEL:CLR KWD
#1 action_1 #2 player_A4 #3 player_B7 PGM1

The name of the current keyword file is displayed in the centre of the Title Bar, against a red background.

Many functions for clip management are similar to the Clip screen: **F1**:NAME ; **F2**:CLIP/CAM ; **F3**:CALL[1], ALT+P:PLAY/PAUSE, ALT+R:RECUE, ALT+T:SET TC; ALT+Z:>ARCHIVE, ALT+Fx:select the Call Channel from VGA is enabled. Refer to the description of the Clip screen for details about these functions.

The ID and name of the clip that keywords are going to be assigned to is displayed at the bottom on the screen, along with the keywords, ranking and archive status already assigned to that clip.

[1] When calling a clip with the F3 function in the Off-Air Keyword Screen, the system will automatically switch to the On-Air Keyword screen, since the clip to assign keywords to has been loaded on a play channel.

10.2.2 How to Assign a Keyword to a Clip

Move the cursor to the desired keyword and press **ENTER**, or click on the keyword with the stylus. The keyword will be assigned to the first available keyword location on the last line of the screen. Repeat this to assign more keywords (up to 3) to the current clip.

Depending on the CLIP/CAM mode, the keywords will be assigned to the current camera angle only (CAM mode), or to all camera angles of the current clip (CLIP mode).

If three keywords are already assigned to the clip, the operator has to clear some of them to be able to assign new keywords.

10.2.3 How to Clear a Keyword with the Keyboard

Press **<TAB>** to move the arrow cursor to the lower area of the screen. Red arrows will appear around one of the keywords or ranking values. Use the ←/→ arrows to select the keyword to remove, and press CTRL+DEL. Press the **<TAB>** key again to move the arrow cursor back to the keywords list.

10.2.4 How to Clear a Keyword with the Stylus

Click on the keyword to remove on the last line, the click on the **CTRL+DEL:CLR KWD** area on the screen, or press CTRL+DEL.

10.2.5 How to Edit the Ranking of the Current Clip with the Keyboard

Press the **<TAB>** key to move the cursor to the lower area of the screen Use the ←/→ arrows to select the desired ranking, and press **ENTER**. The selected ranking is highlighted in green.

10.2.6 How to Edit the Ranking of the Current Clip with the Stylus

Click on the desired ranking, it becomes highlighted in green.

10.2.7 How to Clear All Keywords and the Ranking of a Clip

Press ALT+DEL or click on **ALT+DEL:CLR ALL**: all keywords assigned to the clip will be removed, and the ranking will be reset to the lowest level ("–").

10.2.8 How to Name a Clip Using the Keywords:

Move the cursor to the desired keyword and press ALT+N. The keyword is added at the end of the current name if there is enough space left.

Note

To clear the name of a clip, press **ESC** to empty the Name field, then press **F1** to assign this "empty name" to the clip.

10.3 Searching the Database Using the VGA Screen

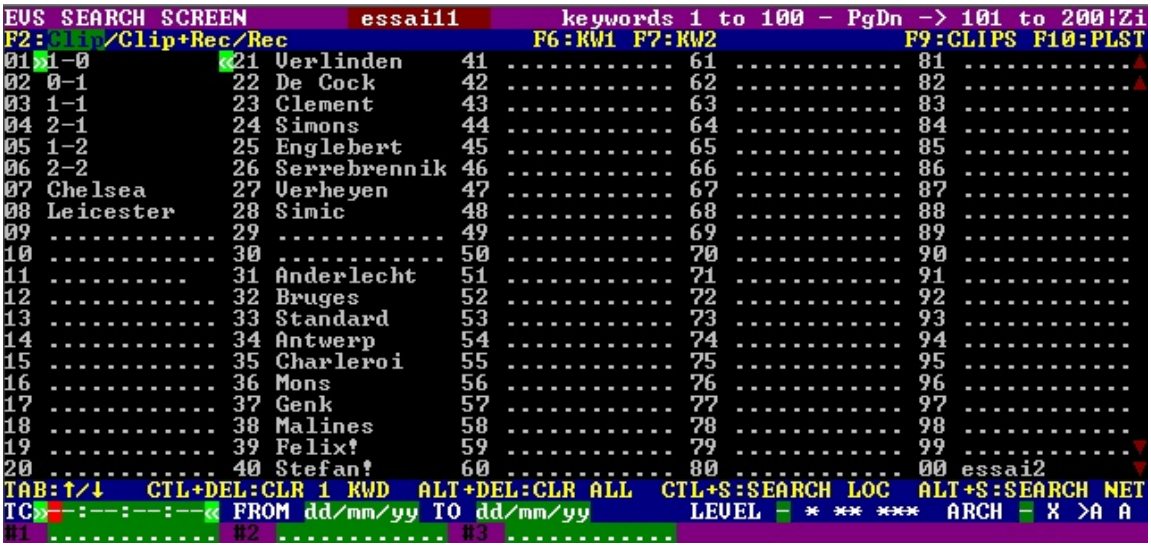
10.3.1 Search Window

Press **F8** to access the Search Screen. The VGA Search screen is made up of several areas that will be named as follows, from the top to the bottom:

1.	Title bar	Bar containing the following elements from left to right: • Screen name • Name of the current keywords file displayed against a red background in the centre of the Title bar • Keyword page displayed.
2.	Function bar	Bar displaying information on the various function keys available and their purpose.
3.	Keyword list	Area displaying the list of keyword list on the page specified in the Title bar.
4.	Operation tab	Tab displaying the key combinations available and the associated actions.
5.	Search Criteria area	Area displaying the search criteria available

Note

Use the **<TAB>** key to shift from the Keyword list to the Search Criteria area and vice versa.


EVS SEARCH SCREEN essai11 keywords 1 to 100 - PgDn -> 101 to 200 Zi
F2: Clip/Clip+Rec/Rec F6:KW1 F7:KW2 F9:CLIPS F10:PLST
01 1-0 21 Verlinden 41 61 81
02 0-1 22 De Cock 42 62 82
03 1-1 23 Clement 43 63 83
04 2-1 24 Simons 44 64 84
05 1-2 25 Englebert 45 65 85
06 2-2 26 Serrebrennik 46 66 86
07 Chelsea 27 Verheyen 47 67 87
08 Leicester 28 Simic 48 68 88
09 29 49 69 89
10 30 50 70 90
11 31 Anderlecht 51 71 91
12 32 Bruges 52 72 92
13 33 Standard 53 73 93
14 34 Antwerp 54 74 94
15 35 Charleroi 55 75 95
16 36 Mons 56 76 96
17 37 Genk 57 77 97
18 38 Malines 58 78 98
19 39 Felix! 59 79 99
20 40 Stefan! 60 80 00 essai2
TAB:↑/↓ CTL+DEL:CLR 1 KWD ALT+DEL:CLR ALL CTL+S:SEARCH LOC ALT+S:SEARCH NET
TC FROM dd/mm/yy TO dd/mm/yy LEVEL * ** *** ARCH X >A A
#1 #2 #3

10.3.2 Search Criteria and Search Options

Search Criteria

Different criteria can be combined to search the database. They can be defined in the Search Criteria available at the bottom of the screen.

When you access the Search screen, the criteria that were last defined are still available on the screen.

Note

If the red cursor is located on another field in the Search Criteria area, use the ←/→ arrow keys to move from one field to the previous or next one, until the red cursor is positioned on the requested field.

Criteria	Description
Timecode	This restricts the search to the clips containing the timecode specified in this field. The timecode search is not applied on growing clips. To define a timecode, type the desired value when the red text cursor is visible in that field. The <**BACKSPACE**> key can be used to clear the last digit entered.
Date from / to	This restricts the search to clips created between these 2 dates specified in these fields. If only **Date to** field is defined, all clips created before that date will be considered. If only **Date from** field is defined, all clips created after that date will be considered. The <**BACKSPACE**> key can be used to clear the last digit entered. Press the <**TAB**> key again to move the cursor back to the keywords list.
Level / Ranking	This restricts the search to the clips with a ranking equal or higher to the ranking defined in that screen. Press the ←/→ arrow keys until reaching the desired ranking, and press **ENTER**. The selected ranking is highlighted in green. Press the <**TAB**> key again to move the cursor back to the keywords list.
Keywords	This restricts the search to the clips containing all keywords defined in this screen. To assign a keyword, move the cursor to the desired keyword and press **ENTER**, or click on the keyword using the stylus. A maximum of 3 keywords can be used as search criteria. If all 3 keyword locations are already occupied, the operator needs to clear some of them to select new keywords.
Archive status	This restricts the search to the clips having the archive status selected. Parameter — On the VGA None (default) — - clips not archived — X clips to be archived — >A clips archived — A

Search Options

In addition to the Search Criteria available at the bottom of the screen, two search options are accessible from the Function keys **F2** and **F4**:

Consider Record Trains and / or Clips in the Search

This option allows the inclusion of record trains in the results in searches with timecode criteria. Press **F2** to toggle between CLIP / CLIP+REC / REC.

Consider Timecodes from the LTC and/or USER TC Tables in the Search

This option allows to take into account the timecodes from the LTC and/or the USER TC tables in searches with timecode criteria. Press **F4** to toggle between LTC / USER / LTC+USER.

10.3.3 Clearing Keywords in the Search Criteria

How to Clear a Keyword with the Keyboard

Press <**TAB**> to move the arrow cursor to the lower area of the screen. Use the ←/→ arrows to move the cursor to the keyword to remove, and press CTRL+DEL. Press the <**TAB**> key again to move the arrow cursor back to the keywords list.

How to Clear a Keyword with the Stylus

Click on the keyword to remove on the last line, the click on the **CTRL+DEL:CLR KWD** area on the screen, or press CTRL+DEL.

How to Clear all Criteria at Once

Press ALT+DEL or click on **ALT+DEL:CLR ALL**: all keywords, timecode, Date From and Date To fields assigned as search criteria will be removed, and the ranking will be reset to the lowest level ("–").

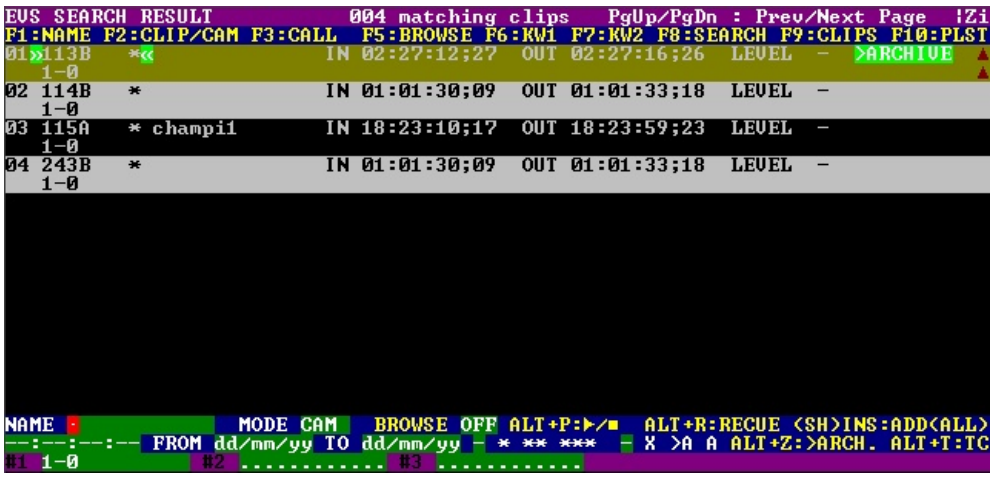
When performing the search, only the clips matching all criteria defined by the operator will be included in the search results. Press CTRL+S (or click on the corresponding area) to search the local database, or press ALT+S (or click on the corresponding area) to search the entire network database.

10.3.4 Search Results

The results of the database search are displayed in the Search Results screen. If new clips which match the search criteria are created after the search, they will be automatically added to the list.

The Search Results screen includes the following areas:

- At the bottom of the screen, the search criteria are displayed for information.
- In the centre of the screen, a list of all matching clips is displayed.


EVS SEARCH RESULT 004 matching clips PgUp/PgDn : Prev/Next Page !Zi
F1:NAME F2:CLIP/CAM F3:CALL F5:BROWSE F6:KW1 F7:KW2 F8:SEARCH F9:CLIPS F10:PLST
01 113B *« IN 02:27:12;27 OUT 02:27:16;26 LEVEL - >ARCHIVE
1-0
02 114B * IN 01:01:30;09 OUT 01:01:33;18 LEVEL -
1-0
03 115A * champi1 IN 18:23:10;17 OUT 18:23:59;23 LEVEL -
1-0
04 243B * IN 01:01:30;09 OUT 01:01:33;18 LEVEL -
1-0
NAME MODE CAM BROWSE OFF ALT+P:▶/■ ALT+R:RECUE (SH)INS:ADD(ALL)
--:--:--:-- FROM dd/mm/yy TO dd/mm/yy - * ** *** - X >A A ALT+Z:>ARCH. ALT+T:TC
#1 1-0 #2 ..... #3 .....

Clip Information

For each clip, the following information is displayed:

- Position in the list
- Clip ID
- Clip name
- Timecode of Short IN and Short OUT points
  - Timecodes from the LTC table are displayed in grey/black.
  - Timecodes from the USER TC table are displayed in yellow.
- Ranking
- Archive status
- Current keywords.

Browsing Through Results and Loading a Clip

The operator can browse this list with the ↑/↓ arrow keys**, PgUp, PgDn, Home** and **End** keys.

If the Browse mode of that screen is ON (**F5:BROWSE**), the clip will be loaded on the primary play channel as soon as it is selected.

If the Browse mode is OFF, the operator must press **ENTER** after selecting the clip to load it.

Note

When a clip is displayed in the search results with a timecode from the VITC table (when this search option has been selected), the clip is loaded with this timecode even if the primary TC is the LTC.

Possible Actions

Many functions from the Clip screen are also available from the Search Results screen:

F1:NAME	**F2:**CLIP/CAM	**F3:**CALL	
ALT+P:PLAY/ PAUSE	ALT+R:RECUE	ALT+T:SET TC	ALT+Z:>ARCHIVE

To return to the Search screen to perform a new search, press ALT+S or **F8**. The previous search criteria are kept until the operator selects new criteria.

How to Add a Clip to the Current Playlist from the Remote Panel

To add a clip from that list to the current playlist, call up the clip, then press **INSERT** or **ENTER** on the Remote Panel.

How to Add the Search Results to the Current Playlist from the VGA

It is possible to directly add one or all search results (clips only) to the current playlist:

- Press **INSERT** on the selected clip to insert only the highlighted one.
- Press SHIFT+INSERT to insert all clips to the end of the current playlist.

10.4 Assigning Keywords Using the Remote Panel

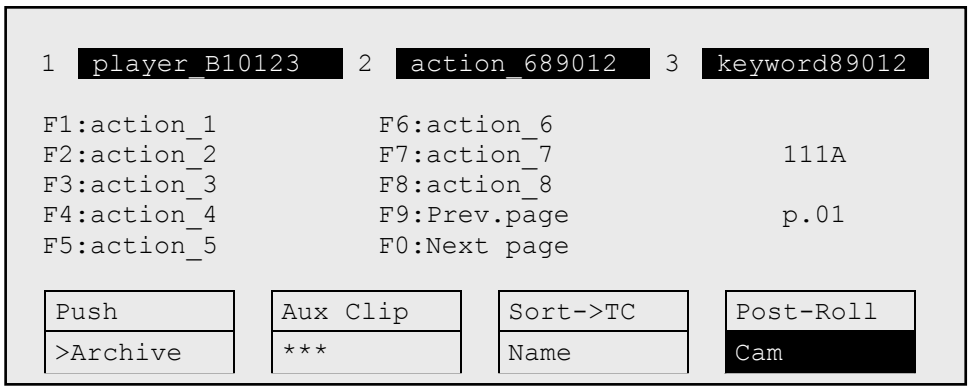
10.4.1 Keyword Settings

A keywords file must be selected in the Setup to enable the keyword assignment functions on the EVS Remote Panel.

- In the **Operational Setup** menu of the remote, the operator can choose between two different modes for the Keyword Mode parameter (P.6.1 F2): “List” (default) or “Numeric”.
- In LIST mode, the list of keywords will appear on the LCD display by group of 8 keywords, and the operator can select the keyword by pressing the corresponding **F_** key. The advantage is that the keywords are visible to the operator, but this mode can be slow if he has to browse through a long list of keywords.
- In NUMERIC mode, the list of keywords is not visible on the LCD display, and the operator selects a keyword by entering its position in the list with the **F_** keys. He can know the position either from a hardcopy of the keywords list, or by looking at one of the VGA Keywords screens, or still from his memory... This mode is faster to operate, but in most cases the operator will need to have the complete list of keywords available next to him.

10.4.2 Assigning Keywords in List Mode

To assign keywords to a clip in list mode, recall the clip, then press **MENU** to access the secondary clip menu on the Remote Panel.



The LCD displays a page containing 8 keywords. Press **F9/F10** to access the previous/next keywords page. To assign a keyword to the current clip, press the **F_** key corresponding to the desired keyword on the LCD display.

Depending on the CLIP/CAM mode defined by the **D** key, the selected keyword will be assigned only to the camera angles loaded on the channels fully controlled by the operator at that time (CAM mode), or to all camera angles of the clip (CLIP mode). The keyword will be assigned to the first available keyword location on the 1st line of the LCD display. If the Keyword Info parameter of the **Operational Setup** menu (P.1.1 F2) is set to “Yes”, it will also appear on the OSD of the corresponding output monitors if the current picture is the Short IN point of the clip.

If all three keywords locations are occupied, the operator has to clear some of them to be able to assign a new keyword to that clip.

To clear one of the keywords already assigned, press CLEAR+F1 / F2 / F3 in the secondary clip menu.

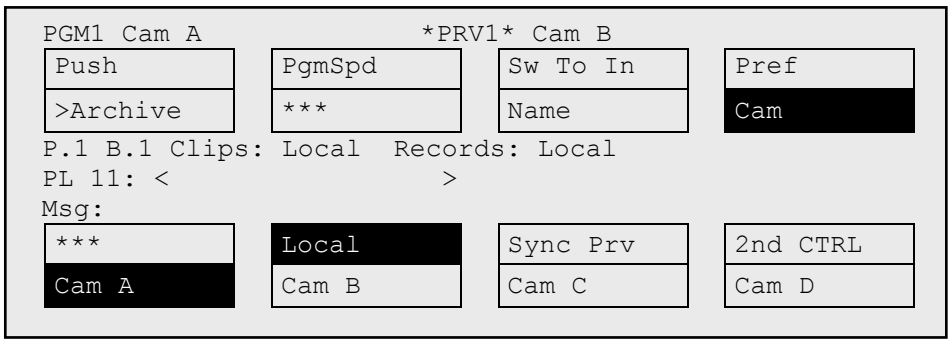
The clip can also be named based on the keywords. Press the Name function (C key) in the secondary menu, then select keywords. The keywords will be added to the name of the clip, up to 12 characters. In this mode, the name of the clip is visible on the OSD. It can also be edited with the following keys:

- **CLEAR**: erases the last character
- SHIFT+CLEAR: insert a blank
- SHIFT+F1-F10: insert a number (1, 2, 3, …, 8, 9, 0)

Once the name is complete, press ENTER to validate or MENU to cancel.

While the operator is in the secondary menu, he has full control of the current clip with the lever, **PLAY** key and jog dial, so he can browse the clip and start a replay at any time.

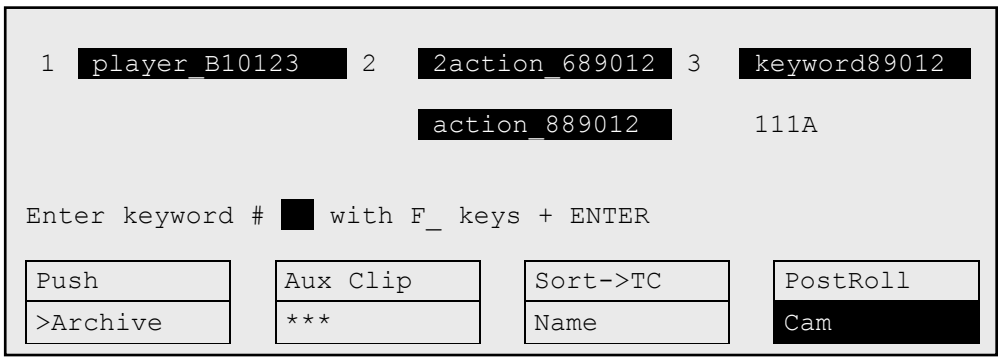
It is also possible to assign keywords and ranking to a clip before it is created. Indeed, when a record train is loaded, as soon as the operator marks an IN or OUT point, the main and secondary menu changes to make the Keyword functions available.



The SHIFT+A function of the main menu, normally used by the Reset CAM function, can be used to define the ranking, without entering the secondary menu. For additional functions like selecting keywords, flagging the future clip for archiving, marking it to be pushed to another machine, defining its name from the keywords, they can be performed from the secondary menu, exactly the same way as for a clip already stored. All these settings are memorized and will be applied to the clip when it is created.

10.4.3 Assigning Keywords in Numeric Mode

To assign keywords to a clip in numeric mode, recall the clip, then press **MENU** to access the secondary clip menu on the Remote Panel.



Enter the keyword position in the list using the **F_** keys. Every time a new digit is entered, the corresponding keyword is displayed in the highlighted area in the centre of the LCD screen, to allow the operator to validate the entry before confirming it. If a wrong digit is entered, press the **CLEAR** key to delete it. Once the right keyword is found, press **ENTER** to confirm or **MENU** to cancel.

The rules for keyword assignment and deleting keywords are identical between LIST and NUMERIC modes.

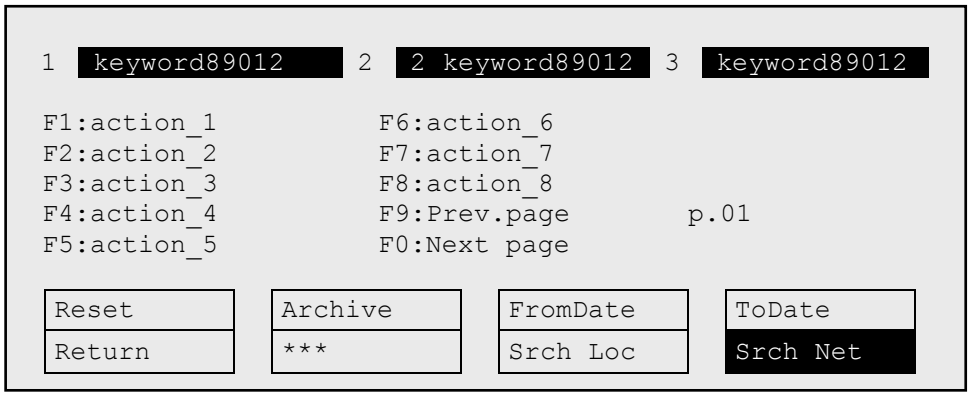
10.5 Searching the Database Using the Remote Panel

Keywords and ranking assigned to clips can be used to search the clips database.

When the current element on the primary channel is a record train, the Search function is directly available from the C position in the secondary menu. To call it, press **MENU** to enter the secondary train menu, then press once the **C** key.

When the current element on the primary channel is a clip, the Search function is still available from the same location, but is “hidden” behind the Name function. To call it in this case, press **MENU** to enter the secondary clip menu, then press twice the **C** key.

In both cases, the LCD display becomes (in LIST mode):



Keywords

They can be selected to be used as search criteria the same way they were selected to be assigned to a clip, in LIST or NUMERIC mode. Up to three keywords can be selected as search criteria. If all three keyword locations are used, some of them must be cleared before selecting a new keyword. Press CLEAR+F1 / F2 / F3 to clear to corresponding keyword location.

Ranking

A ranking can also be used as the only search criteria, or can be combined to the keywords as an additional criterion. Press the **B** key several times to select the desired ranking.

The **RESET** key (SHIFT+A) can be used at any time to clear all three keyword locations and reset the ranking to the lowest level.

Archive

This field allows selecting archive status for search criteria.

Parameter	On the Remote
None (default)	Archive
Clips not archived	>Archive
Clips to be archived	>Archive (blinking)
Clips archived	>Archive

It is possible to **include trains** in the search. The **B** key allows to toggle between CLIPS/CLIPS+REC/REC.

From Date / To Date

Selecting a **From Date** and **To Date** can be done using the SHIFT+C and SHIFT+D keys. Pressing on any of those keys changes the display on the key to dd/mm/yy to indicate the date format. The F keys are used to enter the date, the Clear key being the <**BACKSPACE**>.

To search only for a specific date, use the same date twice in the **From Date** and **To Date** fields.

Once a date is entered, pressing Clear SHIFT+C or Clear SHIFT+D reset the **FromDate** or **ToDate** to the default parameter (dd/mm/yy).

RESET

The **RESET** key: resets the default values of the search criteria (no from/to date) and set the default TC to the TC of loaded on the PGM.

RETURN

The **RETURN** key (**A**) is used to exit the Search function without performing any search.

Search LOC / Search NET

Once the search criteria are defined, press **SRCH LOC** (**C**) to search the local clips database, or **SRCH NET** (**D**) to search the entire network database.

The matching clips are the ones that contain all keywords used as search criteria, and that have at least the requested ranking.

If matching clips are found, the remote will automatically be in Browse mode (the **BROWSE** key is red), allowing the operator to quickly view the Short IN of each clip corresponding to the search criteria by rotating the jog dial. To be able to jog inside a clip, disable the Browse mode by pressing on the **BROWSE** key and move the jog dial. To return to the Browse mode inside the search results, press the **BROWSE** key again.

Search results are reset when going by to Live mode, or when a new search is performed.

If no matching clips are found, a message notifies the operator.

Adding the Search Results to the Current Playlist

It is possible to directly add all search results (clips only) to the current playlist.

Press **ENTER** on the selected clip to insert only that one.

Press SHIFT+ENTER to insert all clips to the end of the current playlist.

11. Playlist Management

11.1 General Information

Playlist Creation

Playlists can be created on the server

- via the LSM Remote Panel and/or the Multicam user interface. The playlists are using specific banks on each page that can be accessed directly without requiring a dedicated creation step (please refer to section 11.4 ‘Selecting and Loading Playlists').
- by means of the Playlist Panel application in IPDirector
- via external protocols..

Limitation on Playlist and Timeline Elements

A playlist can include up to 1000 elements.

Up to 16000 playlist elements can be saved on a server.

Up to 48000 temporary playlist elements, available for undo and redo actions, can be stored on a server. They will be purged each time the Multicam application is closed.

Playlist Location

All playlists created are automatically stored on the banks dedicated to playlists and timelines on the server, i.e. the bank 10 of each page.

Playlists on page 10 are not available from the EVS Remote Panel. These playlists are reserved for external protocols (Odetics, Louth VDCP, EVS AVSP).

Refreshing the Playlist Information

Playlist information is not permanently refreshed on the network. The playlist information for a remote playlist bank is only transferred when entering that bank. If you are already connected to a remote playlist bank, you need to press SHIFT+F10 again to refresh the playlist information for this bank.

11.2 Playlist Modes on the Remote Panel

11.2.1 Introduction

Two modes are available on the Remote Panel to access and manipulate the playlists: The Playlist Edit mode and the Playlist Playout mode:

- The Playlist Edit mode is used to modify the playlist.
- The Playlist Playout mode is used to roll the playlist on air.

Editing the playlist in Playlist Playout mode is not possible.

11.2.2 Accessing the Playlist Edit Mode

Access

When you load a playlist pressing the **PLST** key on the Remote Panel, you directly enter the Playlist Edit mode. The first frame of the element highlighted in the playlist appears on the PGM. At the start, full control will be on the PGM side; scrolling through the playlist can be done here.

From the Playlist Playout mode, you need to press the **EDIT** function (**D** button) or move the jog dial to return to the Playlist Edition mode from where you can edit the playlist.

Overview

The main menu in the Playlist Edit mode available on the Remote Panel display is the following:

Insert	Speed	FX Dur	Delete
		Effect	Edit All

A secondary menu is also available when you select **MENU** from the main menu in the Playlist Edit mode. All commands are not always available in the secondary menu:

Replace	MakeLoc	Redo	Undo
Clr Unav.		OtherAng	Split

In Playlist Edit mode, the duration displayed in the top right corner of the LCD screen is the playlist total duration, from the beginning to the end.

For more details on the main and secondary menus of the Playlist Edit mode, refer to the section 11.9 ‘Overview of Editing Functions in Playlist Edit Mode’, on page 99.

11.2.3 Accessing the Playlist Playout Mode

When you load a playlist pressing the **PLST** key on the Remote Panel, you need to press **PLST** a second time to enter the Playlist Playout mode.

The first frame of the playlist element following the one on the PGM will be displayed on the PRV side. This allows the operator to play only parts of the playlist, starting from the current position.

The menu available from the Playlist Playout mode on the Remote Panel display is the following:

			2nd CTRL
FilmFX	NEXT	SKIP	EDIT

Note

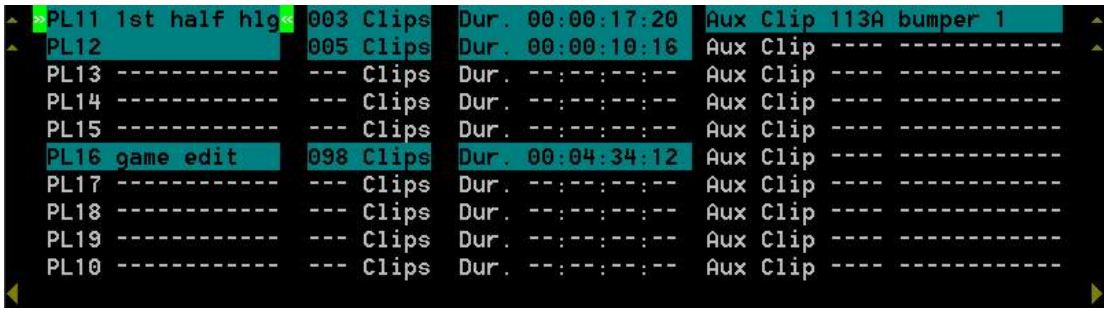
A third selection of the **PLST** button cues the playlist to the beginning, displaying the first playlist element on the PGM side and the following clip on the PRV.

For more details on the Playlist Playout mode, refer to the section 11.8.3 ‘Functions Available on the Remote in Playlist Playout Mode’, on page 98.

11.3 Playlist Display on the VGA

11.3.1 VGA Playlist Bank Screen

Pressing **END** on the keyboard when the Clip screen is displayed allows the users to access the VGA Playlist Bank screen on the given page. This gives an overview on the playlists and timelines stored on the bank.


»PL11 1st half hlg« 003 Clips Dur. 00:00:17:20 Aux Clip 113A bumper 1
PL12 005 Clips Dur. 00:00:10:16 Aux Clip ---- ----------
PL13 ---------- --- Clips Dur. --:--:--:-- Aux Clip ---- ----------
PL14 ---------- --- Clips Dur. --:--:--:-- Aux Clip ---- ----------
PL15 ---------- --- Clips Dur. --:--:--:-- Aux Clip ---- ----------
PL16 game edit 098 Clips Dur. 00:04:34:12 Aux Clip ---- ----------
PL17 ---------- --- Clips Dur. --:--:--:-- Aux Clip ---- ----------
PL18 ---------- --- Clips Dur. --:--:--:-- Aux Clip ---- ----------
PL19 ---------- --- Clips Dur. --:--:--:-- Aux Clip ---- ----------
PL10 ---------- --- Clips Dur. --:--:--:-- Aux Clip ---- ----------

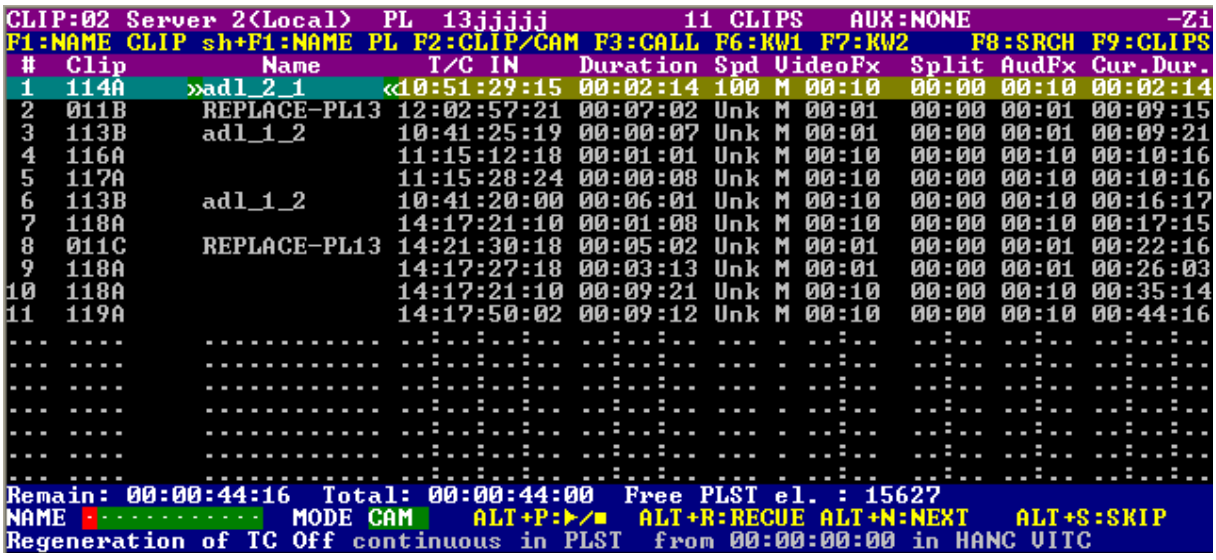
For each playlist the following information is displayed:

Field	Description
Playlist ID	Unique identifier of the playlist on the server. Ex: PL16
Playlist Name	Name of the playlist. It cannot exceed 12 characters. Ex: ”game edit
X clips	Number of available clips in the playlist (unavailable network clips are not taken into account). Ex: 98 clips
Dur: --:--:--:--	Total playback duration with available clips. Ex: 00:04:34:12
Aux Clip	Aux Clip ID and name of the audio auxiliary clip.

11.3.2 VGA Playlist Screen

Introduction

Pressing **F10** on the keyboard calls the VGA Playlist screen. The Playlist screen displays information on the clips included in the current or loaded playlist. Several transport functions are available from this screen. For more information, refer to section 11.8.2 ‘Functions Available from the VGA Playlist Screen’, on page 97.



Display Depending on the Load Playlist Setting

When the **Load Playlist** parameter is set to 'Conditional' in the **Operational Setup** menu on the Remote Panel (P3.3 F2), the information displayed on the VGA Playlist Screen will differ depending on whether a playlist is loaded on the PGM1 or not:

If a playlist is loaded on the PGM1:

- All the information displayed on the Playlist Screen refers to the loaded playlist.
- The **PLAY, SKIP, NEXT** and **RECUE** commands are displayed on the blue-highlighted section at the bottom of the page.

Remain: 00:00:44:16 Total: 00:00:44:00 Free PLST el. : 15627
NAME MODE CAM ALT+P:▶/■ ALT+R:RECUE ALT+N:NEXT ALT+S:SKIP
Regeneration of TC Off continuous in PLST from 00:00:00:00 in HANC VITC

If no playlist is loaded on the PGM1:

- The information displayed on the Playlist screen refers to the current playlist, except the remaining time, which is not displayed.
- The **PLAY, SKIP, NEXT** and **RECUE** commands are NOT displayed on the blue-highlighted section at the bottom of the page.

Remain: --:--:--:-- Total: 00:00:44:00 Free PLST el. : 15627
NAME MODE CAM
Regeneration of TC Off continuous in PLST from 00:00:00:00 in HANC VITC

11.4 Selecting and Loading Playlists

11.4.1 Setting a Current Playlist Versus Loading a Playlist

A distinction is made between setting a current playlist and loading a playlist:

- When you set a current playlist, you access the playlist location on the server but you do not load it on a player channel. You can insert clips directly in the current playlist without having to load the playlist onto a channel.

  When Multicam is switched on, the current playlist is automatically the Playlist 11, i.e. the playlist 1 on bank 10 of page 1.
- When you load a playlist, you actually load it on a given player channel either to edit it or to play it out.

11.4.2 How to Set a Current Playlist

You can set a playlist as the current playlist via the Remote Panel or via the VGA screen.

Via the Remote Panel

To set a current playlist via the Remote Panel, proceed as follows:

1. Do one of the following:
   a. To set a local playlist as the current playlist, go directly to step 2.
   b. To set a distant playlist as the current playlist, press the SHIFT+Network keys and select the **F_** key corresponding to the server on which the playlist is located.

2. Go **t**o the requested page by pressing SHIFT+PAGE+the **F_** key corresponding to the requested page.
3. Go to the playlist bank of the page by pressing SHIFT+F10.
4. Select the playlist as required (press **F1 - F10)**

   PAGE 1 contains Playlists 10 to 19, PAGE 2 contains 20 to 29, PAGE 3 contains 30 to 39, and so on.
5. Press **ENTER** on the Remote Panel to confirm.

Via the VGA Clip Screen

To set a current playlist via the VGA clip screen, proceed as follows:

1. From the clip screen, press **END** to access the playlist bank.
2. Press the down arrow until you select the playlist to define as the current playlist.
3. Pressing **ENTER** on the selected playlist sets it to the current playlist.

11.4.3 How to Recall and Load a Playlist

You can only recall and load a playlist if this is not empty.

To load a playlist on a player channel, proceed as follows:

1. Access the desired playlist bank by pressing **F10** from the requested page.
2. Select the playlist to load with the **F1-F10** keys.

   The selected playlist becomes current and is displayed on the LCD display.
3. Press **PLST** key on the Remote Panel to load the current playlist.

If the new playlist is not empty, it is automatically loaded on the selected player channel (in 3 PGM mode) or on the PGM (in PGM/PRV mode) and it becomes the current playlist.

If the new playlist is empty, the system will ask you whether you want to copy the current playlist at this new location.

11.4.4 How to Exit The Playlist Mode

Press the **RECORD** key on the Remote Panel to exit the playlist mode and return to E2E mode.

11.5 Deleting Playlists

11.5.1 How to Delete a Playlist

Deleting a playlist deletes all the playlist elements from the playlist and the playlist definition in the database.

To delete a playlist, proceed as follows:

1. Access the playlist bank where the playlist to delete is stored, by pressing **F10** from the requested page.
2. Press CLEAR+the F_ key corresponding to the playlist you want to delete.

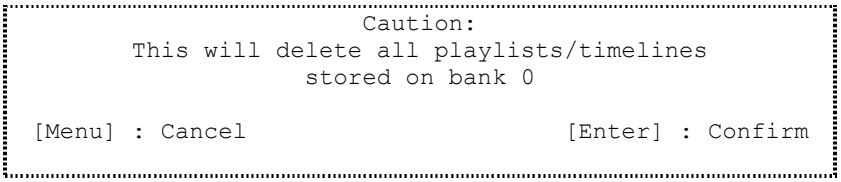
You will be asked or not to confirm the deletion action, depending on the value defined for the **Confirm del clp/plst** parameter in the **Operational Setup** menu of the Remote Panel (p.5.1 F3). The empty playlist location remains available.

11.5.2 How to Delete All Playlists of a Bank

To clear all playlists stored on a given bank, proceed as follows:

1. Select the page that includes the bank on which you want to delete the playlists.
2. Press **CLEAR+SHIFT**, and the **F10** key that corresponds to the requested playlist bank.

   The following confirmation message will be displayed:
3. Press **ENTER** to confirm and the playlists and timelines on the playlist bank of the selected page will be deleted.



11.6 Naming a Playlist or an Element in a Playlist

You can name a playlist from the VGA Playlist Bank screen or from the VGA Playlist screen.

11.6.1 How to Name a Playlist from the VGA Playlist Bank Screen

To name a playlist from the VGA Playlist Bank screen, proceed as follows:

1. From the Clip screen, press **END** to go to the Playlist Bank screen of the requested page.
2. Press the down arrow several times until the playlist to name is selected.
3. Type the desired name on the keyboard.

   It appears in the **Name** field at the bottom of the screen. Use **<BACKSPACE>** to delete the last character, or **ESC** to clear the entire field.
4. Press **F1** to assign the new name to the current playlist.

   The playlist name will appear in the title bar next to the playlist number.

11.6.2 How to Name the Current Playlist on the VGA Playlist Screen

To name the current playlist from the VGA Playlist screen, proceed as follows:

1. Press the **F10** key on the keyboard to open the VGA Playlist screen.

   The current playlist is displayed.
2. Type the desired name on the keyboard.

   It appears in the **Name** field at the bottom of the screen. Use **<BACKSPACE>** to delete the last character, or **ESC** to clear the entire field.
3. Press SHIFT+F1 to assign the new name to the current playlist.

   The playlist name will appear in the title bar next to the playlist number.

11.6.3 How to Name the Current Element in the Loaded Playlist

Note

Naming the current element of the loaded playlist will affect the original clips.

This function is only available when the playlist is the current one in Playlist Edit mode (PLST EDIT) or Playlist Playout mode (PLST DIFF) on the EVS Remote Panel.

To name the current element in the loaded playlist from the VGA Playlist screen, proceed as follows:

1. Press the **F10** key on the keyboard to open the VGA Playlist screen.

The loaded playlist is displayed and the current playlist element on the Remote Panel is selected.

2. Type the desired name for the element on the keyboard.

   It appears in the **Name** field at the bottom of the screen. Use **<BACKSPACE>** to delete the last character, or **ESC** to clear the entire field.

3. Press **F1** to assign the new name to the current element.

   The name for the current element will appear in the **Name** column of the selected element.

11.7 Browsing Within a Playlist

11.7.1 Possible Browsing Methods

You can browse within a playlist in different ways:

- Browse quickly by jumping to the first field of each clip in the playlist:

  For more information, see the section 11.7.3 ‘Browsing Quickly Through a Playlist’, on page 96.

- Browse through the content of each clip in the playlist:

  For more information, see the section 11.7.2 ‘Browsing Through a Playlist’, on page 96.

11.7.2 Browsing Through a Playlist

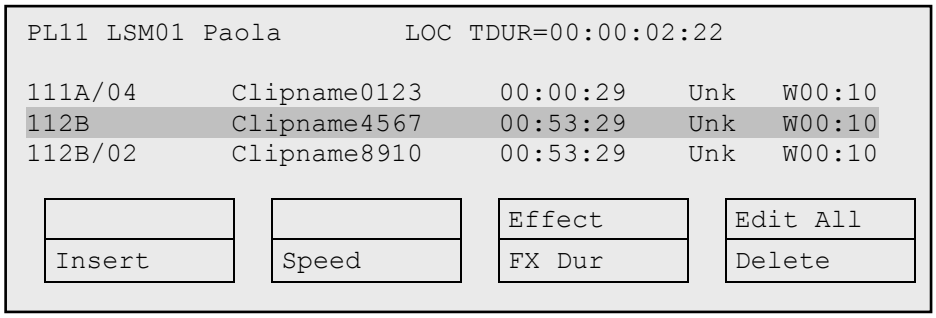
When you load a playlist, the default playlist mode allows you to scroll up and down through all the playlist elements.

11.7.3 Browsing Quickly Through a Playlist

When you are neither in Playlist nor in Clip mode, pressing the **BROWSE** key on the Remote Panel automatically enters the current playlist in Browse mode.

In this mode, you can quickly jump to the first field of each clip inside the playlist by moving the jog dial. To return to the normal Playlist Edit mode, press the **BROWSE** key again.

When you are in Playlist Edit mode, you can of course also activate the Browse mode by pressing the **BROWSE** key.



11.8 Playout Functions with Playlists

11.8.1 Rolling a Playlist

Rolling Action

After recalling a playlist, you will roll the playlist using the pre-defined speed of each clip. Use the **PLAY** key to start rolling the playlist.

Playlist Speed

As soon as the lever is used to start the playback or during playback, the pre-set speed for the current clip is cancelled and set by the lever position only. The playlist will return to pre-set speed mode as soon as another clip with a pre-set speed is found.

Note

When using the **PLAY** key to start the playlist, it is recommended to set the lever at the top position (100%). If the lever is in low position and the operator touches it by mistake while the playlist is rolling, the playlist could freeze on-air.

If the speed for a Super Motion clip is set to “UNK”, pressing the **PLAY** key on that clip will start the playback of the playlist at 33%.

11.8.2 Functions Available from the VGA Playlist Screen

To use the following commands, you must be in Playlist Edit or Playlist Playout mode:

- To enter the Playlist Edit mode, press the **PLST** key on the EVS Remote. The LCD screen of the Remote displays the information about the previous, current and next three clips of the playlist.
- To enter the Playlist Playout mode, press the **PLST** key again.

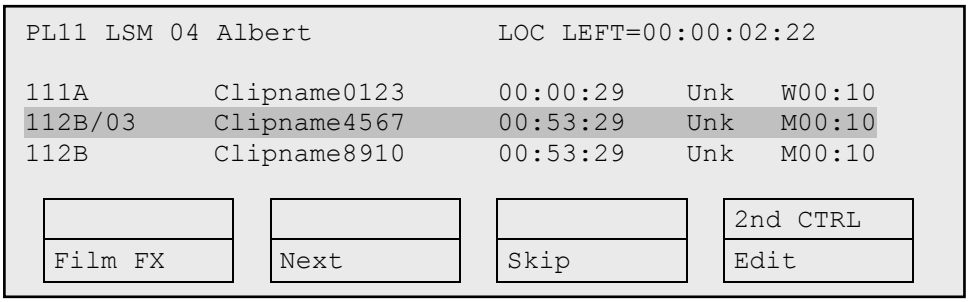
The following operations can be performed from the VGA playlist screen:

Criteria	Description
Naming a playlist	For more information, refer to the section 11.6.1 ‘How to Name a Playlist From the VGA Playlist Bank Screen’, on page 95.
Naming the current clip	For more information, refer to the section 11.6.3 'How to Name the Current Element in the Loaded Playlist’, on page 95.
PLAY/pause	Press ALT+P to start the playback / pause of the playlist from the current position.
RECUE	Press ALT+R to recue to the beginning of the playlist and pause.

Criteria	Description
NEXT	Press ALT+N while the playlist is playing to force immediately the transition to the next clip in the playlist.
SKIP	Press ALT+S while the playlist is playing to skip the next clip. The current clip will play until the defined OUT point, than the playlist will skip the next one and play the one after instead.

11.8.3 Functions Available on the Remote in Playlist Playout Mode

Once the playlist is cued and ready to roll, the menu below is displayed on the Remote LCD. This menu gives the operator the ability to manipulate the playlist while it is playing. The duration displayed in the top right corner of the LCD screen in Playlist Playout mode is the remaining duration until the end of the playlist.



Film FX

Selecting this function will create a film style effect during the playout of the playlist by repeating one field every two fields. Please note that the audio is also affected by this effect, making it unusable and therefore, muted. This mode is deactivated when exiting a playlist.

Next

While the playlist is rolling on air, selecting the **Next** function will start the transition of the next clip with the transition effect listed on the playlist. This can be used if a clip is running too long and it is necessary to shorten up the playing time.

Skip

While the playlist is rolling, the next clip in the sequence is always displayed on the PRV screen. The **Skip** function allows the operator to discard clips before they go on-air. The clip that will be «skipped» is the one displayed on the PRV screen. This function does not remove the clip from the playlist, but it simply allows it to be skipped during playback.

Edit

Selecting the **Edit** function gets the user back to the Playlist Edit mode.

11.9 Overview of Editing Functions in Playlist Edit Mode

The following section presents the various editing functions available from the main and secondary Playlist Edit Mode.

11.9.1 Main Menu in Playlist Edit Mode

Introduction

The main menu in the Playlist Edit mode is available when you select the location of the requested playlist, and press **PLST** on the Remote Panel:

		Effect	Edit All
Insert	Speed	FX Dur	Delete

In the Playlist Edit mode, the first frame of the playlist element loaded (highlighted on the Remote Panel LCD display) can be seen on the PGM. To change any of the options on a clip, simply browse to the requested clip, then select a function from the menu displayed above and use the control lever to adjust to the desired value (when applicable).

Edit All

If you want to edit all clips of the playlist at the same time, select **Edit All** (SHIFT+D**)** before you perform the requested editing action with one of the following playlist commands: **Speed**, **Effect**, **FX Dur**.

Insert

The **Insert** function (**A** key) allows the operator to insert a clip into the playlist. The same operation can be achieved using the **TAKE** key.

See also the section 11.10.4 ‘How to Insert Clips into a Playlist’, on page 103.

Speed

The **Speed** function (**B** key) allows defining the speed at which one or all clips of a playlist will be played. Select the playback speed of the clip with the lever, then press **ENTER** to validate. Values are ‘Unknown’ and from 0 to 100%.

Operators have access to the secondary lever control like when clips are replayed. While editing the speed of a clip, pressing SHIFT+Lever on the Remote allows to access the secondary lever speed defined in the menu.

FX Dur

The **FX Dur** function (**C** key) sets the duration of the transition effect. The default value that initially appears is determined by the value set in the **Setup** menu. The effect duration will affect the transition at the beginning of the selected clip. Use the lever to adjust the value, then press **ENTER** to confirm.

Effect

The **Effect** function (SHIFT+C key) is used to select the type of transition effect (Mix/Wipe/Cut/Fade). Move the lever to set the type of effect, when **Effect** is highlighted. Press **ENTER** to validate.

For more information on the effects types, refer to the section 11.15 ‘Transition Effects’, on page 114.

Delete

The **Delete** function allows the operator to quickly edit a playlist by removing the selected clip. The clip that has been «cut» can then be inserted into another location. This clip is displayed on the second PRV output. To insert it at another position in the playlist, simply go to that position using the jog dial and press the **Insert** key (or **TAKE**).

11.9.2 Secondary Menu in Playlist Edit Mode

Introduction

You can access the secondary menu of the Playlist Edit mode pressing MENU on the Remote Panel when you are in the main menu of the Playlist Edit mode.

Clr Unav.		OtherAng	Add cut
Replace	MakeLoc	Redo	Undo

Replace

The **Replace** function makes it possible to replace a portion of a playlist by the same A/V material to which effects have been added (externally or internally). This consolidates the effects within the playlist. For more information, refer to the section 11.18 'Replace Function', on page 134.

Clr Unav.

The **Clr Unav.** (Clear Unavailable) function (SHIFT+A key) allows the user to remove the clips that are not available on the network from all local playlists. This function is only visible when unavailable clips are present and when the Split Audio Editing is turned off.

MakeLoc

The **MakeLoc** (Make Local) function (**B** key) offers the possibility to copy locally remote clips in a playlist. In the playlist secondary menu, select on the **B** position **MakeLoc**.

When the function is called, the remote clips are replaced by short copies of the local ones as soon as they are available.

Undo/Redo

The last modifications of a playlist can be undone/redone for as long as the operator does not exit the Playlist mode (e.g.: returning to Live).

Pressing the **Undo** command (**D** key) will undo the last modification. Up to 9 modifications can be undone. Once a modification has been undone, it is possible to redo it by pressing the **Redo** key (**C** key).

OtherAng

The **OtherAng** (Other Angle) function (SHIFT+C key) allows the operator to replace the current playlist element by another playlist element showing a different angle of the recorded material.

When the **OtherAng** option is selected, Multicam loads the local and network trains that include the TC IN of the playlist element to replace. The trains are loaded on the PRV channel, at the current TC of the loaded element. The jog is used to shift from one record train to the other.

Once the requested record train is displayed on the PRV channel, pressing **ENTER** replaces the current playlist element by the one created from the selected angle.

See also the section 11.10.9 'How to Change the Camera Angle of a Playlist Element', on page 105.

Add cut

The **Add cut** function (SHIFT+D key) allows the operator to split an existing clip into two independent clips at a selected point. Both resulting clips are duplicates of the original one with additional short-in and short-out points added at the split point.

For more information, refer to the section 11.12 'Adding Cut in Playlist Elements' on page 110.

11.10 Adding & Replacing Clips in a Playlist

11.10.1 Possible Methods for Adding Clips

You can add clips to a playlist in different ways:

- Adding clips at the end of the current playlist without entering the Playlist Edit mode.

  See the section 11.10.3 ‘How to Quickly Add Clips to the Current Playlist’, on page 102.

- Inserting clips before or after the clip selected in the loaded playlist.

  See the section 11.10.4 ‘How to Insert Clips into a Playlist’, on page 103.

- Adding one or more clips returned by a search at the end of the current playlist.

  See the section 11.10.5 ‘How to Insert the Result of a Clip Search into a Playlist’, on page 103.

11.10.2 Modifying a Distant Playlist

Remote playlists are available as ‘Read Only’, and cannot be edited. If you want to modify a network playlist, you have to create a local copy on your machine first. This operation is done instantly if the clips remain in their original location. For details about copying playlists, refer to the section 11.11 ‘Copying Playlists’, on page 106.

11.10.3 How to Quickly Add Clips to the Current Playlist

You can create a playlist very quickly. The experienced operator can include a clip at the end of the playlist containing an action that happened seconds before the playlist is played on air. To add clips quickly at the end of the current playlist, you do not have to enter the **Edit** mode.

To add clips to the current playlist, proceed as follows:

1. Activate a playlist as the current playlist.

   For more information, refer to the section 11.4.2 ‘How to Set a Current Playlist’, on page 92

2. Recall the first clip for your playlist. For more information, refer to the section 9.2.3 ‘Recalling a Clip’, on page 40.
3. Press **ENTER** on the Remote Panel.

   The clip is added at the end of the current playlist.

4. Repeat as many times as necessary until the last clip is entered.

11.10.4 How to Insert Clips into a Playlist

The following rules apply to the procedure below:

- You need to be in PGM/PRV mode to be able to use the **TAKE** key on the Remote Panel to insert a clip.
- Depending on what is selected for the **Insert in playlist** parameter in the **Operational Setup** menu (p.3.1 F6), the clip will be inserted **before or after** this selected position.

To insert a clip into a playlist, proceed as follows:

1. Using the Playlist Edit mode or the Browse mode, scroll to the location where the clip must be inserted.
2. Call the selected clip. It appears on the PRV output.
3. Do one of the following to insert the selected clip in the playlist, at the position shown on the PGM output:
   - Press the **A** key (**INSERT** function) on the Remote Panel
   - Press the **TAKE** key on the Remote Panel
   - Press the SHIFT+INSERT keys on the Remote Panel

A confirmation message will appear if that option has been enabled in the **Setup** menu.

After the clip has been inserted, you can press **PLST** to return to the playlist at the current position.

11.10.5 How to Insert the Result of a Clip Search into a Playlist

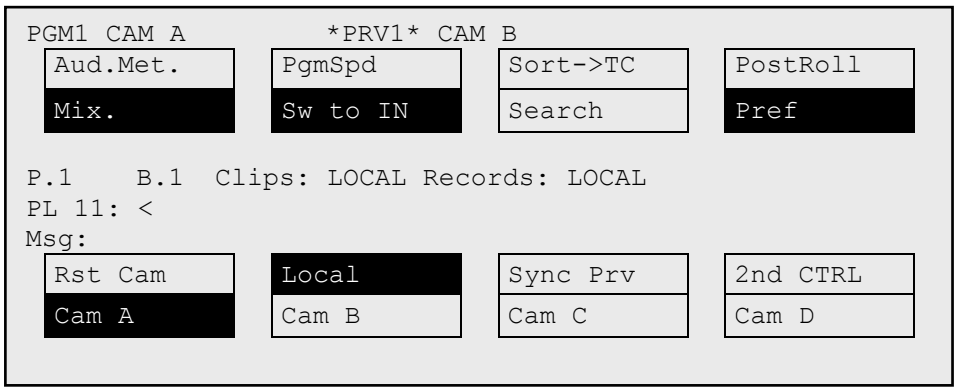
In Playlist Edit mode with a PRV channel, when **PRV CTL** is enabled, the operator has full control of the PRV channel while the playlist remains loaded on the PGM channel.

On the PRV channel, he can perform all clip-related functions, including database search using timecode, keywords and ranking, from the VGA Search Screen as well as from the secondary clip menu of the Remote Panel.

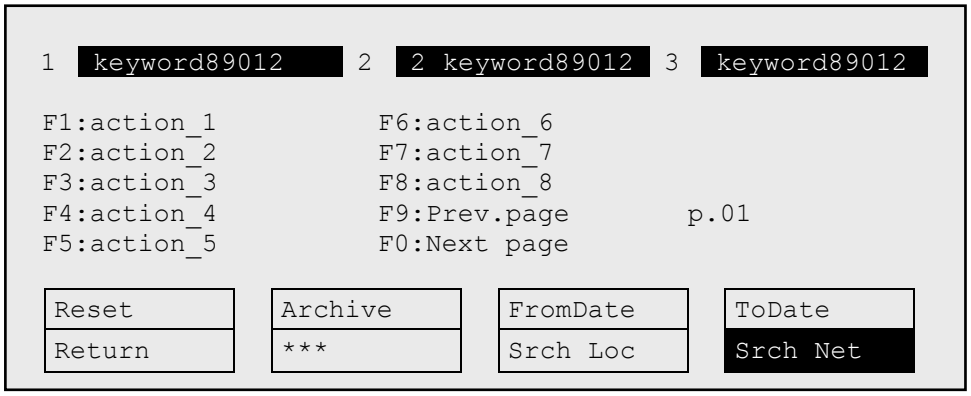
Once the desired clip(s) is(are) found, it(they) can easily be inserted in the playlist that is still loaded on the PGM output. By switching **PRV CTRL** ON or OFF, the operator can very easily combine playlist editing and database search functions.

To insert one or more clips from a search result at the end of the current playlist, proceed as follows:

1. From the main menu, activate the current playlist as explained in the section 11.4.2 ‘How to Set a Current Playlist’, on page 92



2. Press **MENU**+**C** to enter the Search mode:



Enter the search criteria as explained in the section 10.5 ‘Searching the Database using the Remote Panel’, on page 85.

3. Launch the search on the local server or on the whole network by pressing respectively the **C** (Srch Loc) or **D** (Srch Net) keys on the Remote Panel.
4. Do one of the following:
   a. To insert only one clip into the playlist, browse to the clip and press the **INSERT** key on the Remote Panel.
   b. To insert all clips returned in the search result, press the **SHIFT+INSERT** keys on the Remote Panel.

The clip(s) are inserted at the end of the current playlist.

11.10.6 Inserting Growing Clips into Playlists

Growing clips can be inserted in playlists in the same way as other clips. However, their display has the following characteristics:

Display

They will be displayed with the ‘Creating’ message in the playlist on the VGA.

The growing clips ID will be blinking on the mini playlist display and on the playlist screen on the Remote Panel, as well as on the OSD.

Remaining Time

The remaining time in playlists containing growing clips with only an IN point is displayed as --:--:-- on the screens (OSD, VGA, Remote Panel screen) where this information is shown.

11.10.7 How to Delete Playlist Elements from a Playlist

To delete a playlist element in a playlist using the Remote Panel, proceed as follows:

1. While you are in Playlist Edit mode, scroll within the playlist to the element that needs to be deleted.

   If the Browse mode is active, the first frame will appear on the display as each clip is scrolled through.

2. Select **Delete** from the Playlist Edit menu.

The selected element will be removed from the playlist. A confirmation message will appear if the **Confirm Ins/Del clips** parameter has been enabled in the Operational Setup menu (p.3.2 F1).

11.10.8 How to Move an Element Within a Playlist

The action to move a playlist element is described in this section as it uses the **Delete** command.

To move a playlist element within a playlist using the Remote Panel, proceed as follows:

1. While you are in Playlist Edit mode, scroll within the playlist to the clip that needs to be moved.
2. Select **Delete** from the Playlist Edit menu. The clip is sent to the clipboard and loaded on the **PRV** channel.
3. Scroll to the location in the playlist where you want to insert the clip.

   Remember that the position where the clip is inserted will depend on the value of the **Insert in playlist** parameter in the Operational Setup menu (p3.1 F6), that is to say before or after the selected playlist element.

4. Press **TAKE** or **INSERT** on the Remote Panel to insert the clip from the clipboard at the requested location.

The playlist element is inserted at the requested location.

If the playlist element has been trimmed before being moved, the element will be reinserted in the new position with the new guardbands.

11.10.9 How to Change the Camera Angle of a Playlist Element

You can change the camera angle of a playlist element if the material is still available in a local or distant record train.

To change the camera angle of a playlist element, proceed as follows:

1. When you are in Playlist Edit mode, scroll within the playlist to the playlist element.
2. Press **MENU** to access the secondary menu:

		OtherAng	
Replace	MakeLoc		

3. Press SHIFT+C to search and load the local and distant record trains that include the same TC IN as the playlist element.

   The first record train is loaded on the PRV channel, at the current TC of the loaded element.

4. Press **Browse** and use the jog to move within one record train to browse its content.
5. Once you have loaded the requested camera angle on the PRV channel, press **ENTER**.

This will replace the current playlist element by a new clip having the same TC IN and TC OUT. The new clip is stored on the playlist receive page. The effects, the split audio and the swap points defined on the initial playlist element are preserved.

11.11 Copying Playlists

11.11.1 Introduction

From the VGA Clip screen, you can perform cut, copy and paste actions with playlists, in the same way as you do with clips. For more information on these actions, refer to the section 9.3.13 ‘Moving and Copying Clips’, on page 62.

From the Remote Panel, you can only copy a playlist, but not move (cut & paste) it to another location.

11.11.2 Copy Options

When you copy a distant playlist from the VGA, or a local/distant playlist from the Remote Panel to the local EVS server, you have different options:

EDL only or EDL+Clips Copy

- The EDL copy copies only the playlist definition and the playlist elements themselves remain at the original location.
- The EDL+Clips copy copies the playlist definition and the playlist elements to the server on which the copy is requested.

Long or Short Copy

When you copy the material of the playlist elements, you can perform a long or short copy:

- The short copy copies the material between the IN and OUT points of the playlist elements, with clip guardbands as defined on the destination system.

- The long copy copies the original clips, not only the material defined as the playlist element. This makes a difference when the playlist element has been trimmed compared to the original clip.

11.11.3 Possible Copy Actions

The following table provides an overview on the possible actions on the Remote Panel and on the VGA:

	VGA			**Remote Panel**		
	Local PL to local position	**Distant PL** to local position	**Distant PL** to distant position	**Local PL** to local or distant position	**Distant PL** to local position	**Distant PL** to distant position
Copy (EDL)	Yes	Yes	No	Yes	Yes	Yes
Copy (EDL+Short Clip copy)	No	Yes	No	Yes	Yes	Yes
Copy (EDL+Long Clip copy)	No	Yes	No	Yes	Yes	Yes

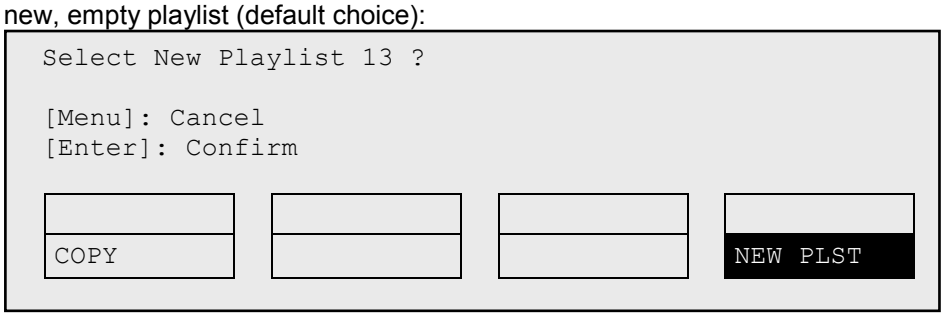
11.11.4 How to Copy a Playlist from the Remote Panel

From the Remote Panel, you can copy playlists from local or distant servers to local or distant servers.

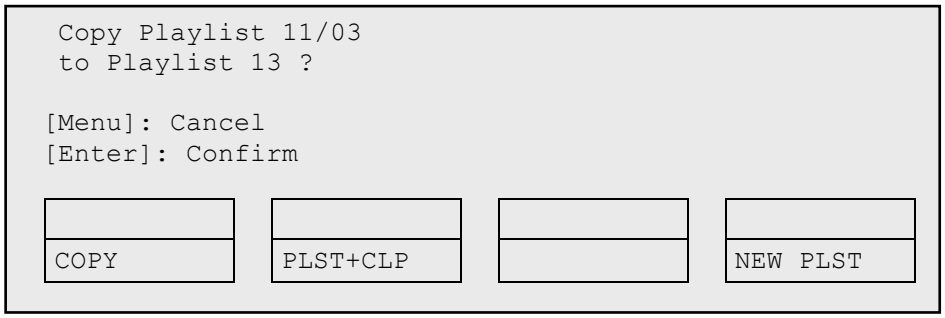
To copy a playlist from the Remote Panel, proceed as follows:

1. Go to playlist bank (local or from another machine on the network).
2. Select the original playlist to copy by pressing the corresponding **F_** key on the Remote.
3. Select an empty playlist location on your local machine.

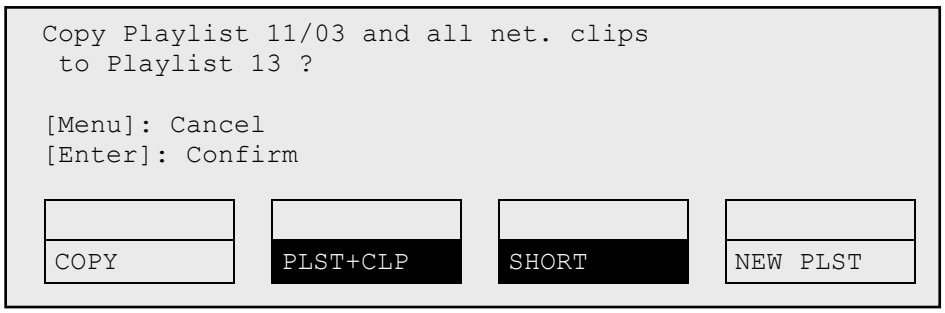
   A new menu appears on the LCD display of the Remote Panel, with the corresponding message on the OSD of the output monitors, asking whether you want to copy the original playlist to the new location or whether you simply want to select a new, empty playlist (default choice):



4. Press **COPY** (**A** key) to select the copy option. The menu becomes:



5. To specify whether to copy the EDL with or without the clips, do one of the following:
   - If you want to copy only the EDL without copying the elements contained in the original playlist, press **ENTER**. The copy is done instantly since there is no material to transfer.
   - If you want to copy the EDL and the playlist elements themselves to your local machine, press PLST+CLP (**B** key). The display becomes:



6. To specify whether to perform a Short or Long copy, select the desired value (SHORT or LONG) pressing the **C** key.
   - **SHORT mode (default):** only the section of the elements between the Short IN and Short OUT as defined in the playlist will be copied, increased by the duration of the guardbands, as defined on the destination system.
   - **LONG mode**: the entire original clips, including their guardbands, will be copied on the destination system.
7. Once the various options have been decided, press **ENTER** to confirm the copy, or **MENU** to cancel.

The **F_** key of the destination playlist will flash until all clips have been copied. This playlist can be recalled during that process for browsing, editing or playback. If some clips have not yet been copied, the original network clip is used instead.

11.11.5 How to Copy a Playlist from the VGA Clip Screen

From the VGA screen, you can copy:

- the EDL of a playlist from the local server to the same server
- the EDL, with or without the playlist elements, from a distant server to the local server.

How to Copy a Local Playlist

To copy a local playlist from the VGA Clip Screen, proceed as follows:

1. From the VGA Clip Screen, open the playlist bank by pressing **END** on the keyboard.
2. Select the playlist to copy and press CTRL+C**.**
3. Go to the empty playlist location on the same server where you want to copy the playlist and press CTRL+V.

The EDL of the playlist is copied to the requested location.

How to Copy a Distant Playlist

To copy a distant playlist from the VGA Clip Screen, proceed as follows

1. From the VGA Clip Screen, press **F9** to open the **Connect** window.
2. With the ↓ and ↑ keys, select the distant server from which you want to copy a playlist and press **ENTER**.
3. On the requested page, go to playlist bank by pressing **END** on the keyboard.
4. Select the original playlist to copy with the ↓ and ↑ keys and click CTRL+C.
5. Press **F9**, select the local server and **ENTER** to come back to the local server.
6. On the requested playlist bank, select an empty playlist location on your local machine and press CTRL+V to copy the playlist.

   The following dialog box pops up:

```
Copy Playlist xx/xx to yy.
Select Copy Playlist Mode (Space Bar)

Playlist Only
Playlist with Clips: Short Mode
Playlist with Clips: Long Mode

Esc: Cancel - Enter: Confirm
```

7. Select the requested copy option pressing the space bar.
8. Press **ENTER** to confirm.

The playlist is copied to the requested location.

11.11.6 Copying Playlists with On-Air Clips

Seamless Process

Long or short copies of a playlist are performed as a background process, which is seamless to the user. If the destination playlist is recalled and the on-air playlist element has not yet been transferred to the local machine, the on-air element played out is the original one. The on-air element will be automatically copied locally when the playlist will be removed from the playout channel.

Impossibility to Queue Copy Processes

COPY PLST+CLIPS processes cannot be queued. If the operator tries starting a new COPY PLST+CLIPS process while the previous one is still running, a message will ask him whether he wants to stop the previous process to start the new one, or cancel his new request.

11.12 Adding Cut in Playlist Elements

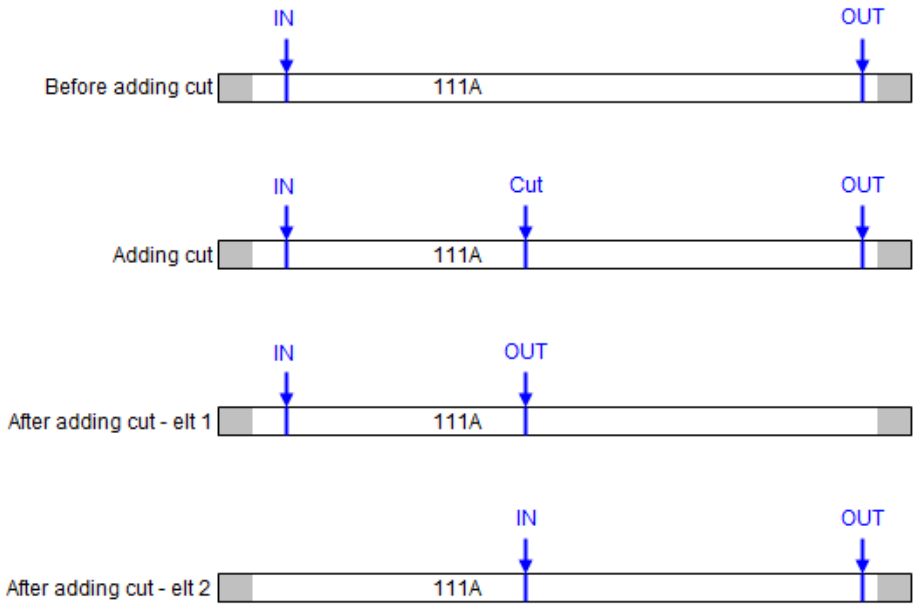
11.12.1 Introduction

The Add cut command duplicates a playlist element (clip, record train...) and adjusts the short-in and short-out points of these new duplicated elements.

On both these elements, the guardbands and other effects are kept unchanged as in the original one.

In the first duplicated element, the short-in point is left unchanged while the short-out point is adjusted to the cut point.

In the second duplicated element, the short-out point is left unchanged while the short-in point is adjusted to the cut point as illustrated hereunder.



11.12.2 Adding Cut Behavior

When adding a cut to a clip, Multicam will behave as follows:

- The transition applied at the cut point is a cut (for both audio and video).
- The speed of the cut elements is the same as the original element, even if it is “Unknown”.
- The stop and start modes of the cut elements are auto.
- Any loop defined on the playlist that includes the original element conserves and includes the cut elements.
- Any tag defined and active on the original element at the cut point is recreated at the short-in of the second cut element.

The adding cut is not possible in the following cases:

- Within a video effect.
- Within an audio effect beginning or finishing the original element.

11.13 Other Editing Functions for Playlists

11.13.1 How to Trim Clips into a Playlist

Every playlist element can be trimmed independently of all other instances of the same clip number.

To trim clips into a playlist, proceed as follows:

1. Browse to the desired element in the playlist.
2. Re-mark a new Short IN or Short OUT.

   If the clip duration is too short, clear the IN or OUT point by selecting **CLEAR** and then set the new IN or OUT point at the desired position.

Note

Clearing restores the existing IN or OUT point to the end of the guardbands of the clip.

11.13.2 How to Sort the Playlist Elements by TC IN

From the VGA, it is possible to sort (reorder) the playlist elements by TC IN. The sort is done on the TC displayed in the TC IN column, whatever the type of TC displayed (User TC or LTC).

Note

This operation will change the order of the playlist elements, and reset the transitions to the default transitions defined on the Remote Panel.

To reorder the playlists elements by TC IN in a playlist, proceed as follows:

1. Open the playlist in the VGA Playlist screen.
2. Press the **TAB** key until you highlight the **Sort by TC IN** field in the Playlist management area at the bottom of the screen.
3. Press **ENTER** to validate, and press **ENTER** a second time to confirm the operation.

The playlist elements are reordered by TC IN.

You can undo the operation using the **Undo** command available in Playlist Edit mode on the Remote Panel.

11.13.3 How to Merge Playlists

From the VGA, it is possible to merge two playlists by copying a playlist and pasting it to an existing playlist. The copied playlist will be added at the end of the destination playlist.

11.13.4 Consolidating a Playlist

Overview

Using the internal loop, you can record a playlist back to the server as a big clip if you want, for example, to record the playlist effects (split screen, target tracking, painting, etc.) as regular video inside the server.

Depending on the **Internal Loop** -parameter in the **Operational Setup** menu (p.9.2 F6), both video and audio can be looped back into the system, or only the video track is looped and the system keeps recording the live audio at the same time.

How to Loop Back a Playlist into the Server

To consolidate a playlist using the internal Loop mode, proceed as follows:

1. Add the requested effects to the playlist.
2. Recue the playlist.
3. Activate the Loop mode via the SHIFT+LOOP key.
4. Roll the playlist.

The playlist will be recorded onto the disks (Channel 1 – CAM A) as a continuous video/audio stream.

When you exit the playlist mode, go back to LIVE record and simply jog back, you will see the playlist recorded with all its transitions and at the speed they were played.

11.13.5 Generating a Continuous Timecode in a Playlist

Overview

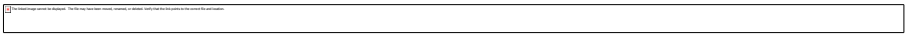
You can regenerate a continuous timecode for the whole playlist or for each clip of a playlist. This can be useful when:

- you do not want to have a playlist with disrupted timecodes from the various playlist elements
- you want to change the timecode type in the VITC or LTC timecode

Process

To regenerate the timecode in a given playlist, proceed as follows:

1. Activate the TC Regeneration and define the related settings on the Playlist page (**F10**), in the blue-highlighted area at the bottom of the page. This feature is defined for each playlist individually:



2. Activate the internal loop using the SHIFT+LOOP keys
3. Roll the playlist.

   This will record the playlist back into the recorder channel 1 (CAM A) with the regenerated timecode.

Activating the Continuous Timecode Regeneration

To activate the continuous timecode regeneration, proceed as follows:

1. In the Playlist page (**F10**), press **<TAB>** several times until the **ON/OFF** field after 'Regeneration of TC' is green highlighted.
2. Press the right arrow key to toggle the function to 'ON'.

The continuous timecode regeneration function is now active. However, the timecode will effectively be regenerated when you replay the playlist after activating a loop. To deactivate the function, press the left arrow on the field to toggle the function to 'OFF'.

Settings for Continuous Timecode in Playlists

The following table describes the various parameters that should be defined when regenerating the timecode in a playlist:

Parameter	Description	Possible Values
Continuous in …	Specifies whether the timecode should be continuous for the whole playlist or for each playlist element.	PLST, CLIP
From …	Specifies the initial TC value to be used for the timecode regeneration	Timecode, LTC TC, User TC
In …	Specifies the TC type in which the timecode should be regenerated	LTC or VITC in SD HANC VITC, HANC LTC or both

11.14 The Auxiliary Audio Clip

11.14.1 Introduction

This option allows adding a new stereo audio track (e.g. sport comments, music, jingles,

ambient sound) to the original video clips. This stereo audio track is available on the PVW output and on analogue outputs 7/8 or on digital outputs 15/16. The selection of the track output is done with the **Audio slow motion** parameter in the **Operational Setup** menu (p.8.1 F1). The original audio tracks are still available on outputs 1/2 (3/4). The auxiliary audio clip selected is always played back with normal speed (100%), whatever the selected playback speed for the video.

When the playback of the playlist is not started from the beginning, the system calculates the offset between the current position and the beginning of the playlist, and applies the same offset to the Aux. Clip, so that it can remain synchronized with the playlist. If the duration of the Aux Clip is longer than the playlist duration, the auxiliary audio clip keeps playing even after the video has stopped. Otherwise, the audio clip ends itself before the end of the playlist, when the audio clip reaches its OUT point.

11.14.2 How to Add/Remove an Auxiliary Audio Clip to a Playlist

To add/remove an auxiliary audio clip to a playlist, proceed as follows:

1. Activate the **Aux. Clip** button by selecting a clip from the clip bank.

   This can be done outside of the PLST EDIT mode, or in PLST EDIT mode with PRV CTRL ON. You will see the **Aux Clip** option appearing in the secondary menu on the LCD of the Remote Panel.

2. Press **MENU** to call the secondary menu, then **Aux Clip** button (SHIFT+B)

   The ID of the Aux Clip appears in the title bar of the Playlist screen (**F10**)

3. To remove the current aux. clip, load the aux clip, call the secondary menu by pressing **MENU**, then press CLEAR+SHIFT+(B) (Aux. Clip) on the Remote.

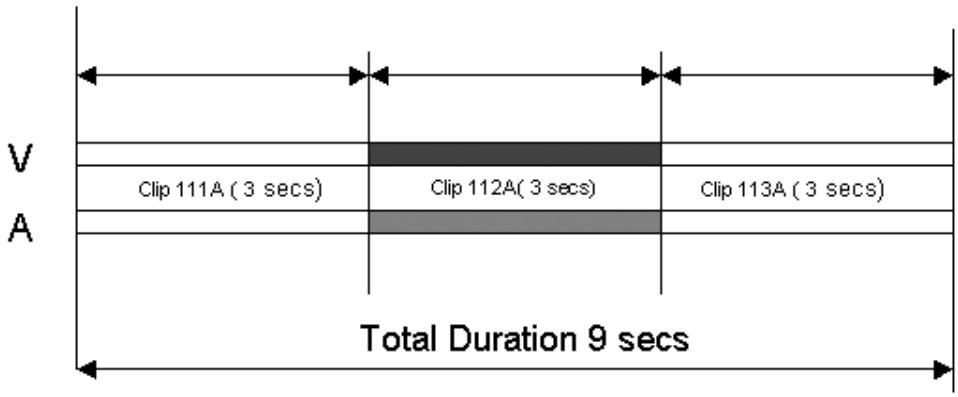
11.15 Transition Effects

11.15.1 Description

You can apply effects on the audio and video transitions of a clip in a playlist. For each transition, you define the effect type and duration.

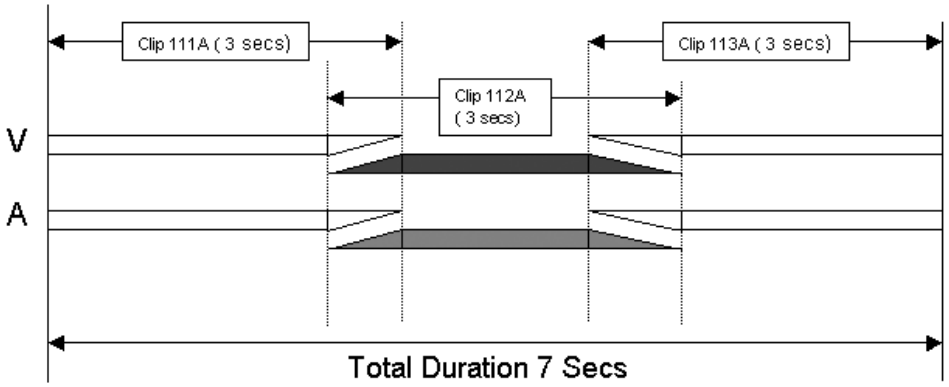
The Split Audio option will be handled in the next chapter.

Normal Playlist with Cuts



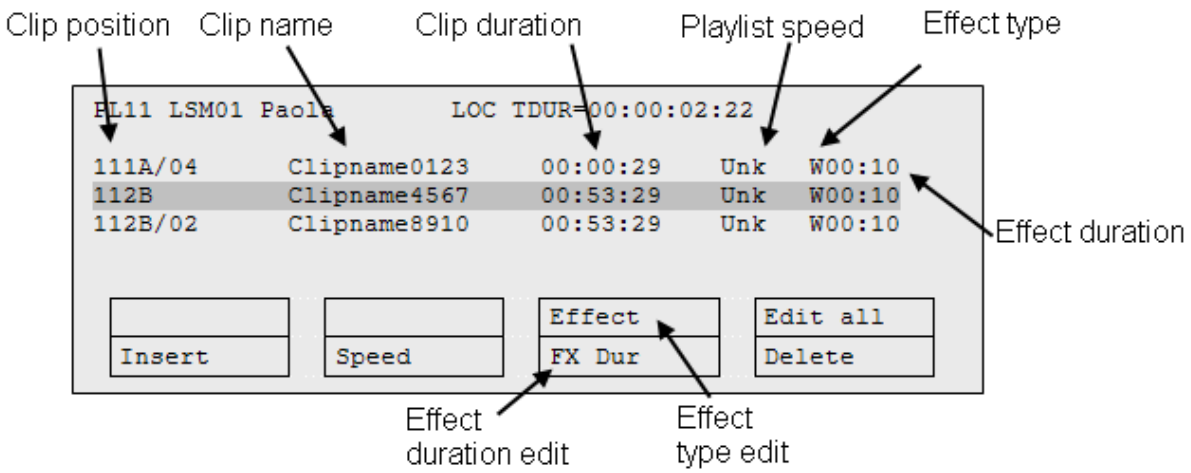
Playlist with 1:00 sec Effect Duration

In an LSM playlist, the video and audio effects end at the OUT point of a clip, so the duration of clips is shortened by the length of the effect.



11.15.2 Accessing Commands for Transition Effects

The functions related to transition effects are available from the main menu of the Playlist Edit mode, and the effects applied are also displayed on the same LCD display:



11.15.3 Default Duration for Video and Audio Transition

It is possible to set a default value for the duration of the video and audio transitions in the **Setup** Menu. Once this is defined, each time a clip is entered or inserted into a playlist, transitions are applied with the default values.

The **Video effect duration** parameter is available in the **Operational Setup** menu (p.3.1 F1), and ranges up to 20:00 secs.

The **Audio effect duration** parameter is available in the **Operational Setup** menu (p.3.1 F3)**.** When the split audio is disabled, the value for this setting is 'Lock to video', and the **Audio effect duration** is the same as the **Video effect duration**.

11.15.4 Overview of Transitions Effect Types

Default Transition Effect

A default mix transition effect (audio and video) is applied to each new clip inserted into the playlist. However, you can change the type of transition effect in the main menu of the Playlist Edit mode. For more information, refer to the section 11.15.5 'How to Define a Transition Effect', on page 117.

Possible Transition Effects

The following video transition effects can be defined. By default, the audio transition is always a mix when the split audio mode is disabled.

Effect Type	Description
Cut	No transition effect is applied between both elements.
Mix	Dissolve effect between both elements.
Wipe	The last frame of the previous element is gradually replaced by the first frames of the next element. The wipe effect is shown as a vertical line moving across the video. The direction of the wipe effect (left to right, right to left) is defined in the **Wipe type** parameter in the **Operational Setup** menu (p.3.1 F4).
Fade from color (<)	A fade out effect from a defined color is applied on the first frame of the clip (on which the effect is defined). The previous clip ends in cut mode. In the drawing below, the previous clip is displayed in red, the next clip is green, and the fade in black:

Effect Type	Description
Fade to color (>)	A fade in effect to a defined color is applied on the previous clip up to the transition in cut mode to the next clip (on which the effect is defined). In the drawing below, the previous clip is displayed in red, the next clip is green, and the fade in black:
Fade to/from color (V fade)	A fade in effect to a defined color is applied on the previous clip up to its OUT point and a fade out effect from the same color is applied on the next clip (on which the effect is defined) from its IN point. The effect duration must be a multiple of 2 frames. In the drawing below, the previous clip is displayed in red, the next clip is green, and the fade in black:

Note

The color of the fade effects is defined with the **Fade to/from colour** parameter in the Playlist settings of the **Operational Setup** menu (p.3.3 F1).

11.15.5 How to Define a Transition Effect

You can add transitions on one or all elements of a playlist as follows, or more precisely modify the default effect applied (mix):

1. Select the playlist location and press **PLST** to open it in Playlist Edit mode. The main menu appears:

		Effect	Edit All
Insert	Speed	FX Dur	Delete

2. Browse to the playlist element at the beginning of which you want to modify the effect or press **Edit All** (**SHIFT+D**) to modify the effect on all playlist elements.
3. To modify the effect, press **Effect** (**SHIFT+C**) and move the lever until the requested effect is displayed on the LCD display.

   The effect type is displayed as a letter/symbol in the information corresponding to the loaded element (see highlighted letter):

   `111A/04  Clipname0123  00:00:29  Unk  W00:10`

   The following effect types are available:

- **C**: Cut
- **W**: Wipe
- **<**: Fade from color
- **M**: Mix
- **>**: Fade to color
- **V**: Fade to/from color

4. To modify the default duration for the transition effect, press **FX Dur** (**C**) and move the lever until the requested duration is displayed in the last field of the corresponding element:

   111A/04 Clipname0123 00:00:29 Unk W**00:20**

5. Press **ENTER** to validate the modifications in effect type and/or duration.

11.16 Split Audio

11.16.1 Introduction

Purpose

The split audio makes it possible to:

- Apply transition effect types and durations which are different on the audio and video tracks.
- Delay or advance the beginning of an audio or video transition.

Activating the Split Audio Mode

Enter the **Setup** menu as described in the Multicam Configuration manual and enable the **Advanced audio editing** parameter in the Operational Setup menu (p.3.2 F2).

Note

You need to have the license code 112 installed to be able to use the split audio functionality. For more information on the required license key, contact the Support or Sales team.

Limitations to the Split Audio Mode

When you play a playlist containing a split audio, the speed cannot be adjusted while playing. Changing the speed has to be set in the playlist itself.

As long as a growing clip is present in a playlist, the split audio is not allowed.

11.16.2 Menus in Split Audio Mode

In Playlist Edit mode, the LCD screen displays V Base (SHIFT+A) and A Base (SHIFT+B) commands:

V Base	A Base	Effect	Edit all
Insert	Speed	Fx Dur	Delete

Activating the V Base option gives access to the following additional menu:

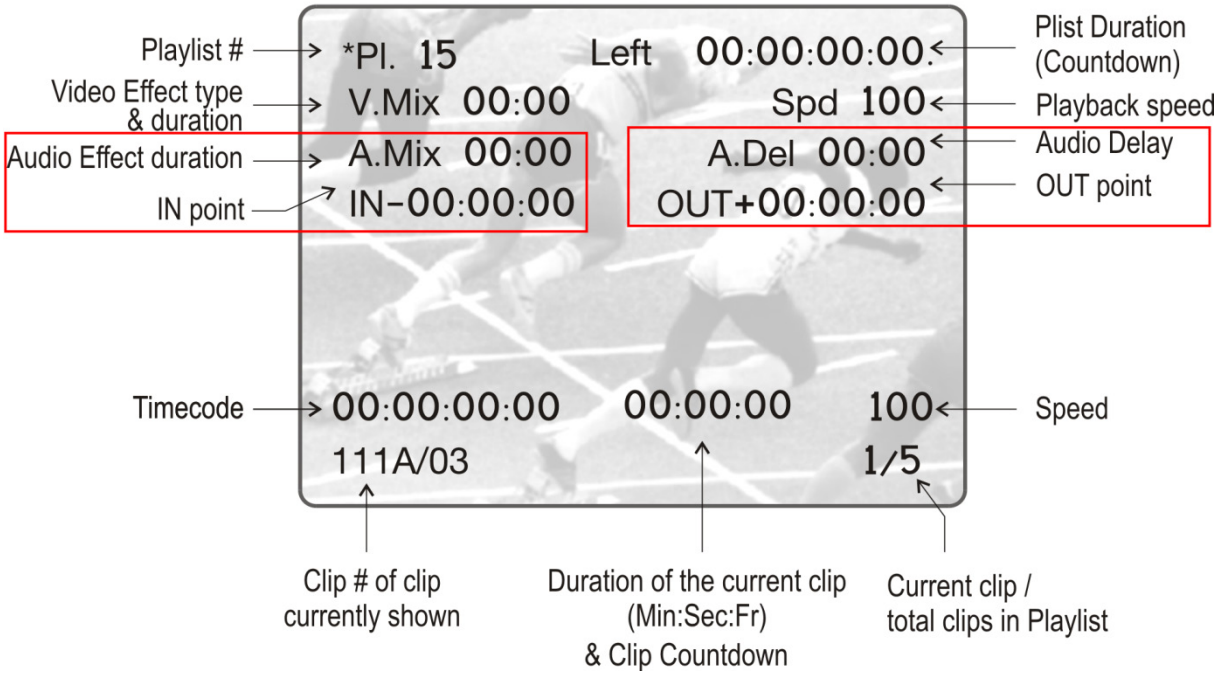
V Base	A Base	Swap	
A Advance	A Delay	A Fx Dur	A Split

Command	Description
A Advance	Advances the beginning of the audio transition.
A Delay	Delays the beginning of the audio transition.
A Fx	Extends the duration of the audio transition on both sides. This creates an audio delay or advance depending on the modification applied to the effect duration.
A Split	Performs an audio advance or delay by specifying the TC for the beginning of the transition.

The A Base menu is similar and allows corresponding actions on video transitions.

11.16.3 OSD Display in Advanced Audio Editing

In the Output Monitor display, additional information is also displayed when the split audio mode is active:



The information displayed below the playback speed will display the audio delay/advance or video delay/advance in frames depending on the editing action applied, or 'no split' if no delay or advance is applied.

11.16.4 Default Duration for the Audio and Video Transitions

General Use

It is possible to set a default value for the duration of the video and audio transitions in the **Setup** Menu. Once this is defined, each time a clip is entered or inserted into a playlist, transitions are applied with the default values.

The **Video effect duration** parameter is available in the **Operational Setup** menu (p.3.1 F1), and ranges up to 20:00 secs.

The **Audio effect duration** parameter is available in the **Operational Setup** menu (p.3.1 F3) and ranges up to 20:00 secs or takes the **Lock to video** value.

Use with Split Audio

The simplest type of Split Audio edit that can be performed on an LSM is to make the video and audio transitions at the beginning of the clip have different durations, such as a 12 Frame Video Mix with a 2 sec Audio cross fade.

The value of the **Audio effect duration** parameter of the **Operational Setup** menu (p.3.1

F3) is only taken into account when the Advanced Audio Editing mode is enabled. Otherwise, the audio effect duration is always locked to the video effect duration, whatever the value of these parameters.

If the **Audio effect duration** parameter in the setup is set to **Lock to video**, it will never be possible to adjust independently the duration of the audio and video transitions. If you want to adjust one of these transitions and the other one follows, please check the **Audio effect duration** parameter in the setup, and make sure it is NOT set to **Lock to Video**.

11.16.5 Associations of Audio and Video Transition Types

The following table shows the possible associations of audio and video transition effects when the **Audio effect duration** parameter is not locked to the video in the **Operational Setup** menu (p.3.1. F3):

Audio Effect / Video Effect	Cut	Mix	Fade from Mute	Fade to Mute	V Fade to/from Mute
Cut	√	√			
Mix		√			
Wipe Left -> Right		√			
Wipe Right -> Left		√			
Fade from color			√		
Fade to color				√	
V Fade (to/from Black)					√

11.16.6 Default Mode for Extending a Transition

Introduction

Whenever you make a video or audio split, the transition originally set is changed, which means extended on either or both sides of the transition boundaries. In the **Operational Setup** menu, use the **Extend split transition** parameter (p.3.2 F3) to set the default mode for extending transition effects, this means you specify where the effect is extended.

Transition Modes

The following table summarizes the various transition modes:

Criteria	Description
Center (on) Cut	The transition is extended equally in both directions. This is the default value.
End (on) Cut	The transition is extended to the left, so that the end of the transition is not changed.
Start (on) Cut	The transition is extended to the right, so that the start of the transition is not changed.
Ask	Asks the operator to choose one of the 3 options above each time he edits a transition.

Possible Cases

You can build different types of playlists depending on:

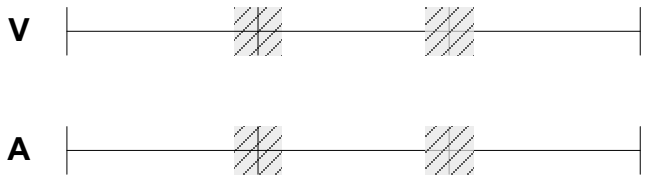
- the transition mode in video or audio split
- the transition duration

The following schemas show, for each transition mode, a playlist with:

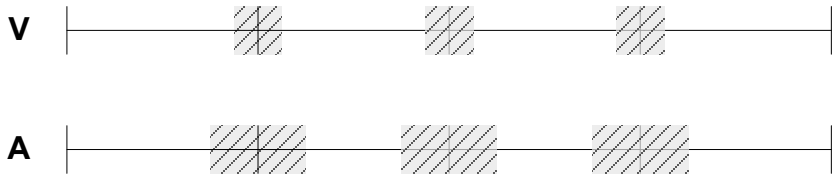
- the same video and audio transitions (no audio or video split)
  on playlists 10, 13 and 16.
- an extended audio transition (V Base edit)
  on playlists 11, 14 and 17.
- an extended video transition (A Base edit)
  on playlists 12, 15 and 18.

Center On Cut

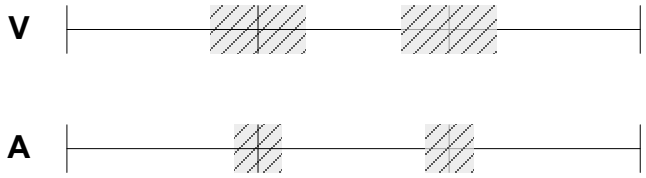
PL 10
Vx 2 – Ax 2



PL 11
Vx 2 – Ax 4

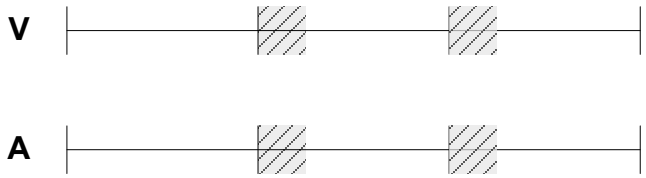


PL 12
Vx 4 – Ax 2

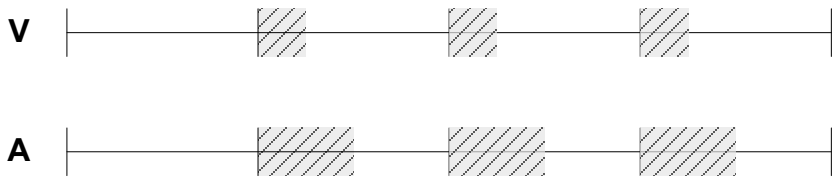


Start On Cut

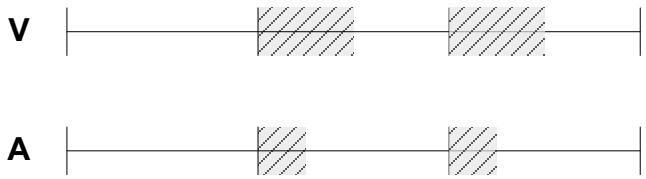
PL 13
Vx 2 – Ax 2

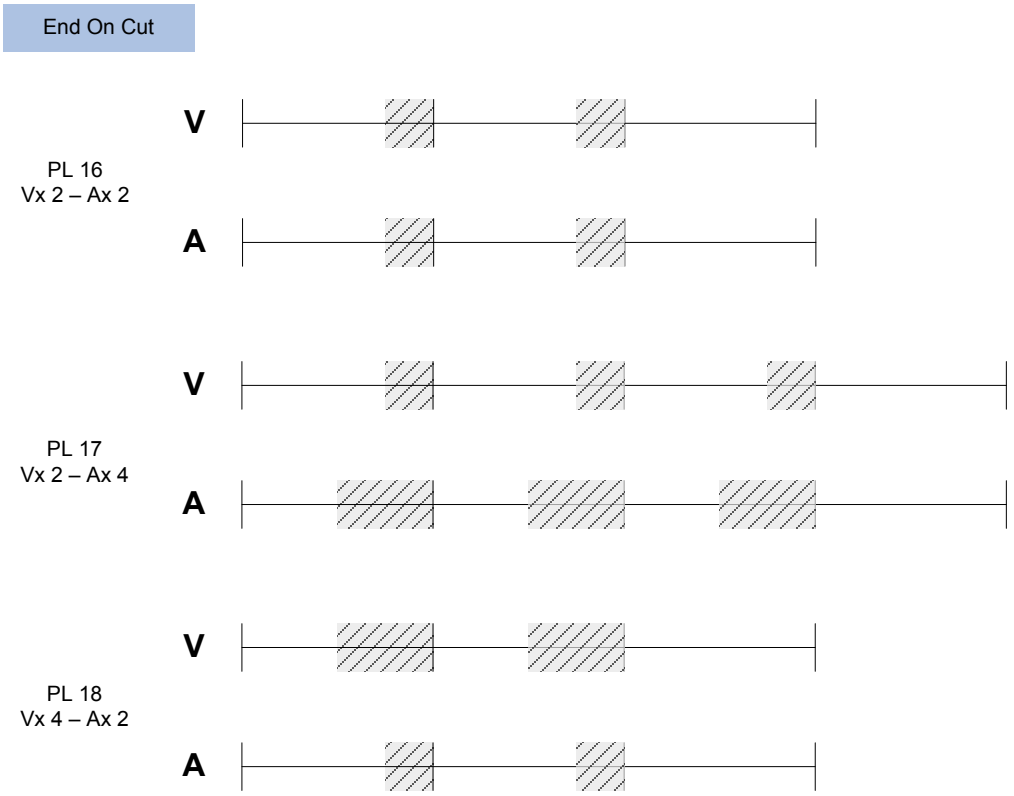


PL 14
Vx 2 – Ax 4



PL 15
Vx 4 – Ax 2





11.16.7 Changing the Audio or Video Effect Duration

Introduction

When you change the video or audio effect duration, you extend or reduce the duration of the video or audio transition:

- In case of **Center on cut**, the transition is extended/reduced on both sides. This creates an audio delay or advance depending on whether you reduce or extend the transition duration.
- In case of **Start on cut**, the transition is extended/reduced at its end point.
- In case of **End on cut**, the transition is extended/reduced at its start point.

How to Change the Video Effect Duration

To change the video effect duration, proceed as follows:

1. Enter the Playlist Edit mode.
2. Browse to the desired clip in the playlist.
3. Press SHIFT+A BASE (**A**).
4. Press to highlight **V Fx Dur (C).**
5. Move the lever to adjust the value.

How to Change the Audio Effect Duration

To change the audio effect duration, proceed as follows:

1. Enter the Playlist Edit mode.
2. Browse to the desired clip in the playlist.
3. Press SHIFT+V Base (**A**).
4. Press to highlight **A Fx Dur** (**C**).
5. When you move the Lever to adjust the value.

11.16.8 Performing A „V Base" Edit

In a V Base edit, you delay or advance the beginning of the audio transition compared to the video transition of the clip.

How to Perform an Audio Delay

In this case, the beginning of the audio transition will be delayed compared to the video transition.

The **Start on Cut** and **End on Cut** are not taken into account in these editing actions.

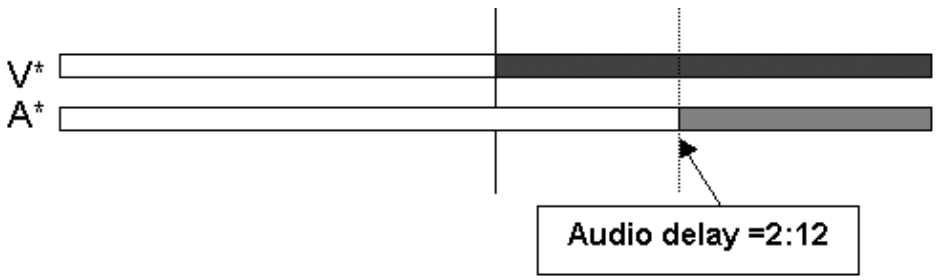
1. Enter the Playlist Edit mode.
2. Browse to the desired clip in the playlist.
3. Press to highlight **V Base** (SHIFT+A).
4. Press to highlight **A Delay** (**B**).
5. Enter a value with the **F_** keys including leading zeros

   (0+2+1+2= 2:12), OR move the lever and press **ENTER**.

The value entered will be present on the PRV SCREEN when the clip is next to play in a playlist.

Edit Point (V BASE)

Audio is extended from the end of the previous clip and the audio on the clip being edited is shortened.



How to Perform an Audio Advance

In this case, the audio transition will be advanced compared to the video transition.

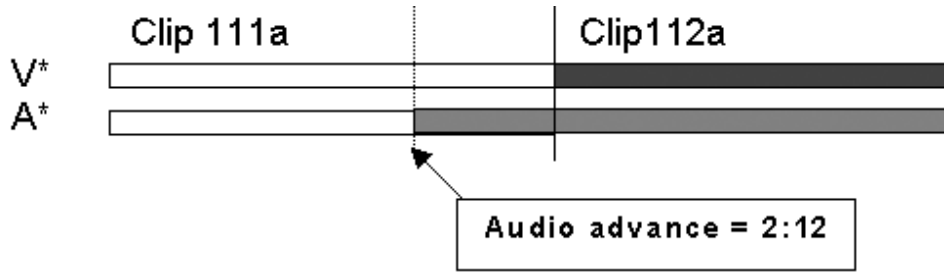
The **Start on Cut** and **End on Cut** are not taken into account in these editing actions.

1. Enter the Playlist Edit mode.
2. Browse to the desired clip in the playlist.
3. Press to highlight **V Base** (SHIFT+A).
4. Press to highlight **A Advance** (**A**).
5. Enter a value on the **F_** keys including leading zeros (0+2+1+2= 2:12), OR move the lever and press **ENTER**.

The value entered will be present on the PRV SCREEN when the clip is next to play in a playlist.

Edit Point (V Base)

Audio is shortened on the previous clip and the beginning of the clip being edited is extended.



Note

When editing a playlist in V Base or A Base, the video transition information will be on the top line of the OSD display, whereas the audio transition information will be on the bottom line of the OSD display.

How to Perform an Audio Split

When you perform an audio split, you specify the TC for the beginning or the end of the audio transition. In this case, you can choose whether you perform an audio delay or advance.

1. Enter the Playlist Edit mode.
2. Browse to the desired clip in the playlist.
3. Press to highlight **V Base** (SHIFT+A).
4. Press to highlight **A Split** (**D**).
5. Jog to the point where you want to set your transition.
6. Do one of the following:
   - Mark an OUT point if you do an audio delay.
   - Mark an IN point if you do an audio advance.

   The value entered will be present on the PRV screen when the clip is next to play in a playlist.

11.16.9 Performing an „A Base" Edit

In an A Base edit, you delay or advance the beginning of the video transition compared to the audio transition of the clip.

How to Perform a Video Advance

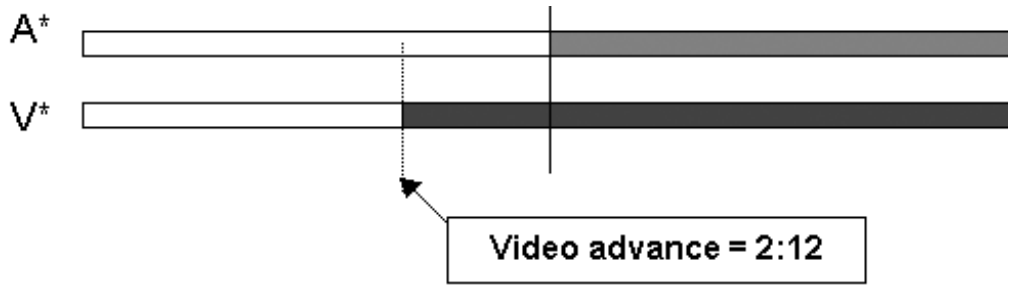
In this case, the beginning of the video transition will be advanced compared to the audio transition.

1. Enter the Playlist Edit mode.
2. Browse to the desired clip in the playlist.
3. Press SHIFT+A Base (**B**).
4. Press to highlight **V Advance** (SHIFT+A)
5. At the on screen prompt, enter a value on the **F_** keys including leading zeros (0+2+1+2= 2:12), OR move the lever and press **ENTER**.

The value entered will be present on the PRV SCREEN when the clip is next to play in a playlist.

Edit point (A Base)

Video is shortened in the previous clip and the video from the clip being edited is extended.



How to Perform a Video Delay

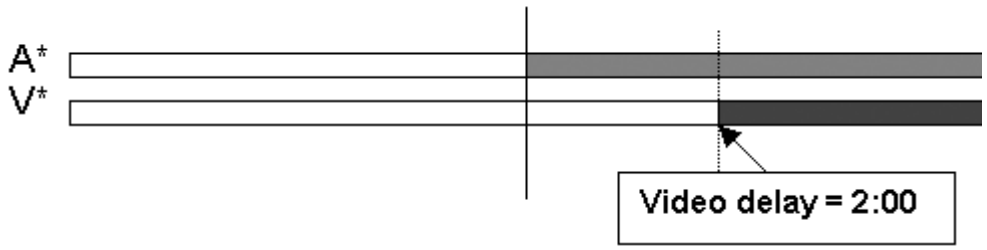
In this case, the beginning of the video transition is delayed compared to the audio transition.

1. Enter the Playlist Edit mode.
2. Browse to the desired clip in the playlist.
3. Press SHIFT+A Base (**B**).
4. Press to highlight **V DELAY** (SHIFT+B)
5. At the on screen prompt, enter a value on the **F_** keys including leading zeros (0+2+1+2= 2:12), OR move the lever and press **ENTER**.

The value entered will be present on the PRV SCREEN when the clip is next to play in a playlist.

Edit point (A BASE)

Video from the previous clip is extended and video from the clip being edited is shortened.



Note

When editing using the Video IN/OUT as the reference point (V Base), the video will be the top line on the OSD display. When editing using the audio IN/OUT as the reference point (A Base), the audio will be the top line on the OSD display.

How to Perform a Video Split

When you perform a video split, you specify the TC for the beginning or end of the video transition.

1. Enter the Playlist Edit mode.
2. Browse to the desired clip in the playlist.
3. Press to highlight **A Base** (SHIFT+B)
4. Press to highlight **V SPLIT** (**D**)
5. Jog to the point where you want to set your transition
6. Do one of the following:
   - Mark an OUT point if you do a video delay.
   - Mark an IN point if you do a video advance.

The value entered will be present on the PRV SCREEN when the clip is next to play in a playlist.

IN Key Colors in Playlist Mode

When the Playlist is sitting on the Video and Audio IN point of a Clip, the **IN** key will light red.

When the Playlist is sitting on the Video IN point of a Clip, the **IN** key will also light red.

When the Playlist is sitting on the Audio IN point of a Clip, the **IN** key will flash red.

If the Playlist is in a position where the Audio and Video are synchronous, the **IN/OUT** keys will be green.

If the Playlist is in a position where the Audio and Video IN points have been split, the **IN** key will flash green.

OUT Key Colors in Playlist Mode

When the Playlist is sitting on the Video and Audio OUT point of a Clip, the **OUT** key will light red.

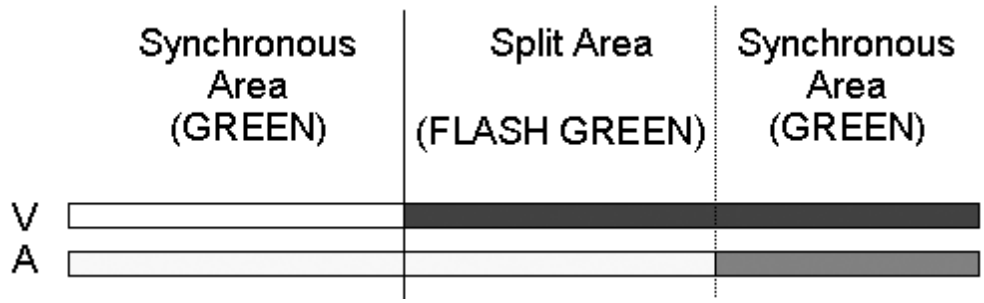
When the Playlist is sitting on the Video OUT point of a Clip, the **OUT** key will light green.

When the Playlist is sitting on the Audio OUT point of a Clip, the **OUT** key will flash red.

If the Playlist is in a position where the Audio and Video are synchronous, the **IN/OUT** keys will be green.

If the Playlist is in a position where the Audio and Video OUT points have been split, the **OUT** key will flash green.

Example on Audio Delay Edit



Note

Transitions are reset to zero on INSERT and DELETE functions.

11.16.10How to Insert a Clip into a Playlist with Split Audio

To insert a clip into a playlist with split audio, proceed as follows:

1. Enter the Playlist Edit mode.
2. Browse to the desired clip in the playlist.
3. Press to highlight **V Base** (SHIFT+A)
4. Press to highlight **A Split** (**D**)
5. Jog to the point where you want to set your transition and mark an OUT point if you do an audio delay or mark an IN point if you do an audio advance.

11.17 Swap Audio Tracks

11.17.1 Introduction

The swap audio tracks mode allows swapping audio tracks between two points in a playlist.

In four-track mode, the “auto” mode replaces audio tracks 1&2 by audio tracks 3&4 in four audio mode. It replaces audio track 1 by audio track 2 in stereo mode.

The manual mode lets you choose which tracks to replace.

Note

In 8- and 16-track modes, you only have access to the manual mode.

11.17.2 How to Enable the Audio Swap Mode

To enable the Audio Swap mode, proceed as follows:

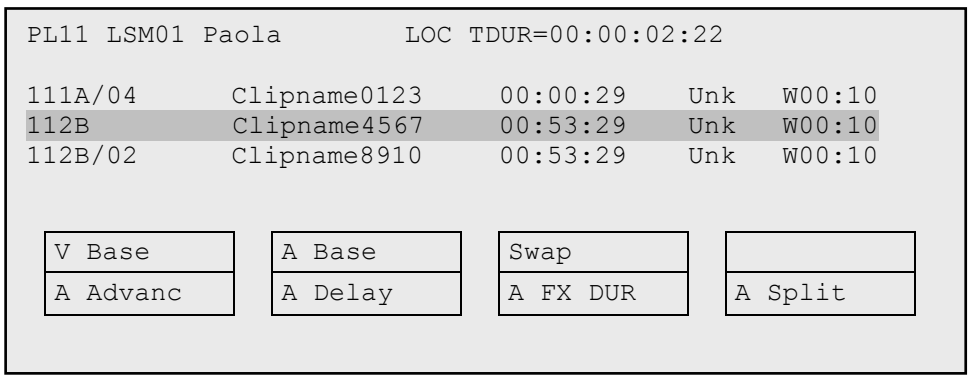
1. Enter the **Setup** menu.
2. Select the **Swap audio tracks** parameter value in the **Operational Setup** menu (p.3.2 F4).
3. Choose a value between “Auto” and “Manual”.

   Please note that the **Advanced audio editing** parameter has to be enabled in the **Operational Setup** menu (p.3.2 F2). This option requires a specific license code. If that code is not installed on the server, this option cannot be turned on.

11.17.3 How to Perform a Swap Audio Track in Auto Mode

To perform a swap audio track in Auto mode, proceed as follows:

1. In Playlist Edit mode, select the Video Base mode (V Base). The LCD screen will now display additional function:



2. Press the **SWAP** function (SHIFT+D).
3. Jog your playlist until you reach the point where you want to change the audio tracks. Mark an IN point.

   The OSD screen indicates the following information:

In dual stereo mode

```
*PL11/03* LEFT 06:42:22
V Mix 02:25   Spd.Unk
A Mix 02:25 A.Del. 00:00
IN-00:00:00 OUT+00:00:27


          00:10
          1→3 3→3
          2→4 4→4
12:23:45:13 00:07:13 100
112B/04 ClipName 999/999
```

In stereo mode

```
*PL11/03* LEFT 06:42:22
V Mix 02:25   Spd.Unk
A Mix 02:25 A.Del. 00:00
IN-00:00:00 OUT+00:00:27


          00:10
            1→2
            2→2
12:23:45:13 00:07:13 100
112B/04 ClipName 999/999
```

4. Press the **Swap** function again(SHIFT+D).
5. Jog your playlist until you reach the point where you want to reset the original audio tracks. Mark an OUT point.

   The OSD screen indicates the following information:

   In eight tracks mode

```
*PL11/03* LEFT 06:42:22
V Mix 02:25   Spd.Unk
A Mix 02:25 A.Del. 00:00
IN-00:00:00 OUT+00:00:27


          00:10
     1→3 3→3 5→5 7→7
     2→4 4→4 6→6 8→8
12:23:45:13 00:07:13 100
112B/04 ClipName 999/999
```

In dual stereo mode

```
*PL11/03* LEFT 06:42:22
V Mix 02:25   Spd.Unk
A Mix 02:25 A.Del. 00:00
IN-00:00:00 OUT+00:00:27


          00:10
          3→1 3→3
          4→2 4→4
12:23:45:13 00:07:13 100
112B/04 ClipName 999/999
```

In stereo mode

```
*PL11/03* LEFT 06:42:22
V Mix 02:25   Spd.Unk
A Mix 02:25 A.Del. 00:00
IN-00:00:00 OUT+00:00:27

          00:10
            2→1
            2→2
12:23:45:13 00:07:13 100
112B/04 ClipName 999/999
```

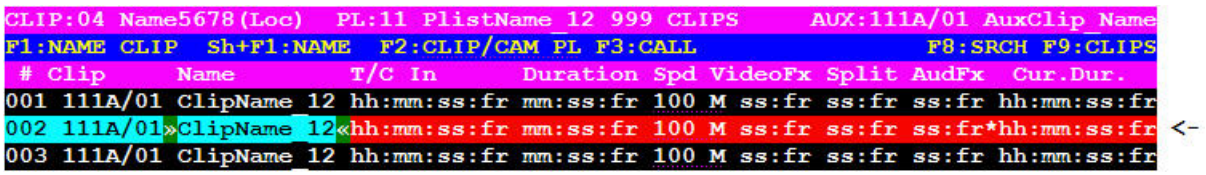
One can set as many swap points as needed.

If only an IN swap point is set for one clip, the audio tracks will be reset by default for the next clip in the playlist.

Please note that when a swap point is set, a cross-fade is played between the original audio track and the new track. The duration of the cross-fade is the default audio transition.

When a swap point is present in a playlist, the display on the VGA and on the OSD changes: a "*" is added next to the audio Fx information.

Display on the VGA


CLIP:04 Name5678(Loc) PL:11 PlistName 12 999 CLIPS AUX:111A/01 AuxClip Name
F1:NAME CLIP Sh+F1:NAME F2:CLIP/CAM PL F3:CALL F8:SRCH F9:CLIPS
Clip Name T/C In Duration Spd VideoFx Split AudFx Cur.Dur.
001 111A/01 ClipName 12 hh:mm:ss:fr mm:ss:fr 100 M ss:fr ss:fr ss:fr hh:mm:ss:fr
002 111A/01 ClipName 12 hh:mm:ss:fr mm:ss:fr 100 M ss:fr ss:fr ss:fr*hh:mm:ss:fr <-
003 111A/01 ClipName 12 hh:mm:ss:fr mm:ss:fr 100 M ss:fr ss:fr ss:fr hh:mm:ss:fr

Display on the OSD

```
*PL11/03* LEFT 06:42:22
V Mix 02:25   Spd.Unk
A Mix*02:25 A.Del. 00:00
IN-00:00:00 OUT+00:00:27
```

LOOP

```
12:23:45:13 00:07:13 100
112B/04 ClipName 999/999
```

11.17.4 How to Perform a Swap Audio Track in Manual Mode

If the Manual mode is selected for the **Swap audio tracks** parameter value in the **Operational Setup** menu (p.3.2 F4), the swap operates in a similar way but asks the operator which track to swap when setting the swap points.

Step 1

First the operator is being asked to select the original track:

- In 2-Track mode: you select between the tracks 1,2 or **MENU** to cancel.
- In 4-Track mode: you select among the tracks 1 to 4, or **MENU** to cancel.
- In 8-Track mode: you select among the tracks 1 to 8, or **MENU** to cancel.
- In 16-Track mode: you select among the tracks 1 to 16, or **MENU** to cancel. The tracks 1-8 are displayed on a 1st page and the tracks 9-16 are available via **F10** on a 2nd page.

The function keys are used to select the track to change.

Step 2

When the choice is made, the operator selects by which track the selected one has to be replaced:

- In 2-Track mode: you select the new track between 1, 2 or 0.
- In 4-Track mode: you select the new track among 1 to 4, or 0
- In 8-Track mode: you select the new track among 1 to 8, or 0
- In 16-Track mode: you select the new track among 1 to 16, or 0. The tracks 1-8 are displayed on a 1st page and the tracks 9-16 are available via **F10** on a 2nd page.

Several swap points can be set on the same timecode (e.g.: 1 -> 3, 2 -> 4).

Note

Selecting **track 0 will mute the output** until the next swap point or the end of the clip.

11.17.5 Deleting Swap Points

When the operator is on a swap point, pressing CLEAR+IN/OUT deletes the current swap point. All swap points for that timecode are deleted.

When the operator is not on a swap point, pressing CLEAR+IN/OUT brings up a confirmation message to delete all swap points for the current clip.

11.17.6 Navigating Among Swap Points

When the operator is in Swap mode, the previous swap point can be reached by pressing the **Go to In** button on the Remote. The next swap point is reached by pressing the **Go to Out** button. The function works in loop mode.

11.18 Replace Function

11.18.1 Introduction

The purpose of the Replace function is to automate a routine used by operators to create effects in a playlist: the operator would loop a section or an entire playlist back to themselves and, during the playback, add some effects externally (graphic insertion for instance) or internally (changing the speed).

While the operator would play the playlist back, and insert the requested effects, the playback result would be re-injected into the playlist from a predefined IN frame. The OUT point of the replaced section would be predefined or manually defined in the record process.

Note

The Replace function is not allowed on playlists containing growing clips.

11.18.2 Entering the Replace Function

A secondary menu with the Replace function has been added to the Playlist Edit mode. Pressing **MENU** in Playlist Edit mode brings up the following menu:

Clr Unav.		OtherAng	
Replace	MakeLoc	Redo	Undo

Select **Replace** in this secondary menu to enter the Replace function.

11.18.3 Replace Edit and Replace Playback Modes

Similar to the playlist, the **Replace** function has two modes:

The Replace Edit Mode

This mode allows to specify the following information for the Replace:

- IN point and OUT point, for the section to replace in the playlist. The OUT point can also be defined during the Replace itself.
- Loop mode parameters. See also the section ‘Loop Mode in the Replace Function’, on page 136.

In the Replace Edit mode, the playlist is considered as one entity on which you can mark one IN point and one OUT point (pressing the IN and OUT points does not retrim the current playlist clip).

Those IN and OUT points will be used to determine what portion of the playlist will be

replaced.

The Replace Playback Mode

In this mode, you play the playlist back and insert the new section between the defined IN and OUT points.

After you have selected the required settings for the Replace function, the Replace Playback mode is automatically activated: the playlist is cued before the IN point (to create guardbands), ready to be initiated.

The playlist is played at the speed defined in the playlist but the lever can also be used to vary the playback speed.

When the Protect OUT point of the clip is reached, a clip containing the IN and OUT points with the guardbands is created on the Receive page defined in the **Setup** menu. The loop is stopped and the user switches back to match Frame Edit mode.

11.18.4 Replace with IN/OUT Points or with IN Point Only

You can perform a Replace action in two ways:

- by defining an IN and OUT points in the Replace Edit mode.
- by defining only an IN point in the Replace Edit mode, and defining the OUT point while you perform the Replace in the Replace Playback mode.

For more information on how to perform a Replace, refer to the section ‘How to Perform a Replace’, on page 135.

Important

The IN and OUT points cannot be marked on a transition (including split audio transitions and swap zones) or on a split zone (the key will flash red when it is the case).

11.18.5 How to Perform a Replace

You first define the Replace function in the Replace Edit mode. Then, you execute the Replace function in the Replace Playback mode.

To perform a Replace, proceed as follows:

1. Open the playlist in which you want to replace a section in Playlist Edit mode.
2. In Playlist Edit mode, press **Menu** on the Remote Panel to access the secondary menu.
3. Press the **A** key to enter the Replace Edit mode.
4. Use the jog dial to reach the desired IN point for the Replace section and press the **IN** key to mark it.

   When the IN point has been marked, the display switches to:

		Cam A	+2fields
Replace	Int.Loop	Ext.Loop	

5. If you want to specify the **OUT** point for the Replace section at this stage, jog to the requested point and press the **OUT** key. Otherwise, you can define the **OUT** point while you perform the Replace.

The Int. Loop **(B)** and Ext. Loop **(C)** keys are blinking.

5. If you want to specify the **OUT** point for the Replace section at this stage, jog to the requested point and press the **OUT** key. Otherwise, you can define the **OUT** point while you perform the Replace.
6. Press the **B** or **C** key to select whether you will use the internal loop or external loop to perform the Replace.

   For more information on the loop type and additional parameters, refer to the section 'Loop Mode in the Replace Function', on page 136.
   The playlist is cued before the IN point (to create guardbands), ready to be initiated.
   A message appears on Remote: "`Start Replace: lever or play button`".
7. Push the lever or press the **Play** key on the Remote Panel to shift to the Replace Playback mode and start the Replace process.
8. If you have not defined the OUT point for the Replace in step 5, press the **OUT** key when you reach the desired OUT point.

   While the Replace is being performed, the following messages are displayed on the OSD:
   "`Replace in Progress`"
   "`Clipping guardbands`"
   "`Replace by clip xxx`"
   On the Remote Panel, a confirmation message pops up:

```
Replace in/out by clip xxx ?
MENU: Cancel – ENTER: OK.
```

9. Press **Enter** on the Remote Panel to validate the Replace:

   The material between the IN and OUT points is replaced with the newly created clip.
   The playlist returns to Playlist Edit mode, positioned at the end of the inserted clip.
   You can also cancel the Replace by pressing the **Menu** key on the Remote Panel.

11.18.6 Loop Mode in the Replace Function

Loop Type

When the IN point has been marked, the display switches to:

		Cam A	+2fields
Replace	Int.Loop	Ext.Loop	

The Int. Loop and Ext. Loop keys are blinking.

Before entering the Replace Playback mode, the operator has to choose between Internal Loop or External Loop.

The Internal Loop is the same loop as the existing loop process.

The External Loop allows you to select on which channel you will physically re-record the output of your PGM. The link is physical: it is necessary to make the video link manually with a router or video/audio cables; it is not done inside the server.

Additional Loop Parameters

Additional parameters are available for the external loop:

- With the **Cam A** function (SHIFT+C), you can select the camera the PGM will be recorded to for the external LOOP process. Press SHIFT+C until the desired camera is selected.
- With the **+2 fields** function (SHIFT+D), you can select by how much the video coming back to your record channel will be delayed. If you are using a DVE, it could introduce a delay. This system is based on the assumption that audio and video are in sync when they hit the record channel. The delay value cannot be negative.

  Select SHIFT+D to highlight the delay value; the display allows you to add frames or fields of delay to the delay value. Pressing either **MENU** or SHIFT+D will leave this mode.

12. Timeline Management

12.1 Introduction

12.1.1 Timeline Creation

Note

The timeline feature is a software option, which requires the license code 112 being installed. For more information on the required license key, contact the Support or Sales team.

The timeline editing feature allows for video and audio inserts in a linear way.

In Multicam, the editing is based on an existing playlist converted into a timeline. The timeline mode synchronizes one video track and two audio tracks. Each audio track is composed of one mono audio.

Timelines can be created on the server

- via the Remote Panel or in the Multicam user interface
- by means of the IPEdit application in IPDirector

In IPEdit, the timelines include 1 video track and can include up to 4 audio tracks. Each audio track is composed of one to four mono or stereo audio channels.

12.1.2 Timeline Editing

Supported Editing Features

In Multicam, two main editing features are available from version 8.00.00:

- **Extend Overwrite:** This operation extends the duration of any clip on any track across the entire duration of the timeline.
- **Insert Overwrite:** This operation inserts video or audio independently on any of the tracks or on all tracks at the same time.

All timeline editing operations performed with the Remote Panel are done in a linear manner: each insert or extend operation will take out some existing material and replace it with a new one. Because the process is destructive, undo and redo are available during the edition of a timeline as long as the LIVE button (**REC**) is not used. When operators go live, the undo history is lost. You can undo and redo up to nine actions.

Editing IPEdit Timelines in Multicam

The users can create and edit more advanced timelines in IPEdit. For more information, refer to the IPEdit user manual.

For this reason, you will be able to edit IPEdit timelines with the Remote Panel only if they include features supported by Multicam, that is to say:

- One video track and two audio tracks.
- No effect on any of the tracks

Editing Multicam Timelines in IPEdit

In IPEdit, you can edit any timeline created in Multicam. Once a timeline has been edited in IPEdit and contains features unsupported in Multicam, it is no longer editable with the Remote Panel.

12.1.3 Timeline Playout

You can play out:

- any local or remote timeline that has been created on the Remote Panel or in IPEdit.
- a local timeline that is still being edited by a Remote Panel or in IPEdit.

12.1.4 Principles for Accessing Timelines

The access to timelines from IPEdit and the Remote Panel follows the principles defined below:

- Two player channels are required to load a timeline. This pair of player channels is called the timeline engine.
  - In Multicam, you need to be in PGM/PRV mode to load a timeline.
  - In IPEdit, you need to select a timeline engine (PGM1/PGM2 or PGM3/PGM4) before you load or create a timeline.
- It is not possible to load or play the same timeline at a time using the same timeline engine. However, you can load or play the same timeline on two different timeline engines. When the parallel control mode is set up, the control switches to exclusive mode on the channels where a timeline is loaded.
- It is not possible to edit the same timeline at a time from IPEdit and from the Remote Panel using different timeline engines.

12.2 Creating Timelines

In Multicam, the timelines have to be created from an existing playlist or copied from an existing timeline. After the transformation, the duration of the timeline cannot be changed.

Note

It is not allowed to insert growing clips in a timeline.

12.2.1 How to Create a Timeline from a playlist from the Remote Panel

To transform a playlist to a timeline with the Remote Panel, proceed as follows:

1. Select the playlist you want to convert.
2. Press an empty playlist position.
3. Select the **CopyToTL** option (**B**) on the Remote to copy the playlist to a timeline on the selected empty position.
4. Press **ENTER** on the Remote to confirm the CopyToTL

The playlist is converted into a timeline at the playlist position you selected.

12.2.2 How to Create a Timeline from a playlist from the VGA

To transform a playlist to a timeline in the VGA, proceed as follows:

1. Select the playlist you want to convert.
2. Press CTRL+C on the keyboard to copy it.
3. Paste it into an empty playlist position using the CTRL+T keys (rather than CTRL+V)

The timeline appears on the Remote as “TL” for timeline, rather than “PL” for playlists. On the Clip screen, they appear with a blue background (similar to the protected clip identifier).

All audio tracks in the playlist are placed on the timeline as follows:

- Each timeline has two audio edit tracks containing each single audio.
- Independently from the audio configuration, the first audio input is edited on the first audio track, the second input on the second audio track.
- The **Mono per group** parameter in the **Operational Setup** menu (p.4.1 F1) can be used to set how many audio mono tracks can be used for each edit track.

12.3 Copying Timelines

12.3.1 Overview

Copying a timeline works exactly in the same way as copying a playlist. For this reason,

this section will only provide an overview on the possible timeline copies.

For more details on how to copy a timeline from the VGA and from the Remote Panel, refer to the section 11.11 ‘Copying Playlists’, on page 106.

The following table provides an overview on the possible actions on the Remote Panel and on the VGA:

	VGA			**Remote Panel**		
	Local TL to local position	**Distant TL** to local position	**Distant TL** to distant position	**Local TL** to local or distant position	**Distant TL** to local position	**Distant TL** to distant position
Copy (EDL)	Yes	Yes	No	Yes	Yes	Yes
Copy (EDL+Short Clip copy)	No	Yes	No	Yes	Yes	Yes
Copy (EDL+Long Clip copy)	No	Yes	No	Yes	Yes	Yes

12.4 Timeline Edit Mode

12.4.1 Accessing the Timeline Edit Mode

When the current playlist is a timeline, pressing the **PLST** button enters the Timeline Edit mode.

The first user of the server gets its first two outputs assigned in this manner:

- Output 1: TL Recorder. It always shows the edit.
- Output 2: TL Player

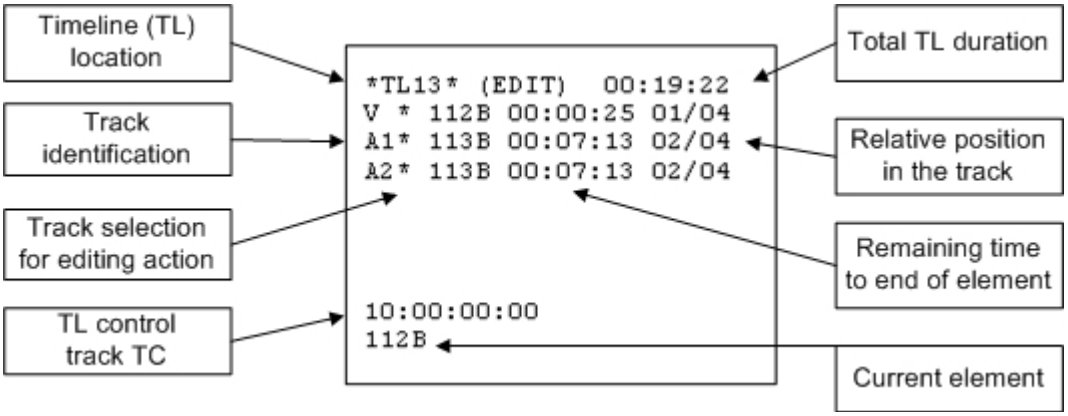
It works the same way as when the server is on a train or on a clip with one PGM, including all mark IN - mark OUT functions, network access, etc.

12.4.2 Controlling the Recorder

In the Timeline Edit mode, operators work by default on the recorder: the jog dial and the lever control the recorder. Operators listen to all the timeline audio tracks.

12.4.3 OSD Display

The following information is displayed on the OSD when the timeline is loaded in Timeline Edit mode:



For each track:

- track description (V, A1, A2)
- asterisk next to the track description showing the selected tracks, on which the editing action will be applied
- current clip ID
- remaining time
- relative position in the track.

12.4.4 LCD Information

The same information as on the OSD is displayed on the Remote Panel with the current timecode of the clip in addition:

```
TL13 <NAME>    LEFT=00:00:00:00

V * 112B 01/04 00:00:25 11:15:15:11
A1* 113B 02/04 00:07:13 11:15:10:08
A2* 113B 02/04 00:07:13 11:15:10:08
```

The **ABCD** Soft keys on the Remote Panel are as follows:

Video	Audio 1	Audio 2	

The red blinking keys of the Remote Panel and the black background on the LCD display show on which track(s) the Insert and Extend actions will be carried out. In other words, if video only is selected when users do an insert, only the video will be inserted.

12.5 Timeline Playout Mode

12.5.1 Accessing the Timeline Playout Mode

When you load a timeline pressing the **PLST** key on the Remote Panel, you need to press **PLST** a second time to enter the Timeline playout mode.

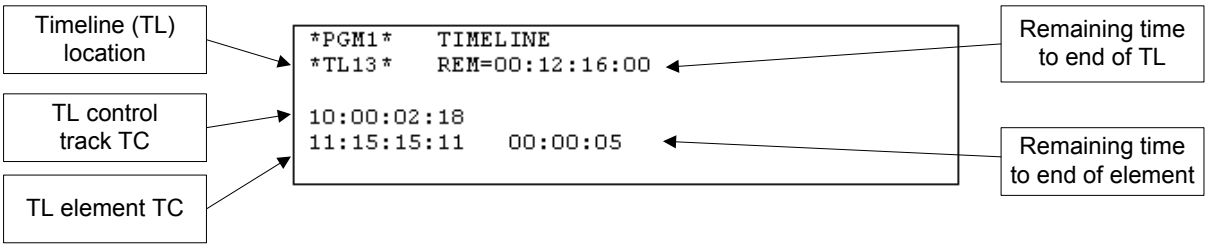
The first frame of the timeline element following the one on the PGM will be displayed on the PRV side.

Note

A third selection of the **PLST** button cues the timeline to the beginning, displaying the first timeline element on the PGM side and the following clip on the PRV.

12.5.2 OSD Display

The following information is displayed on the OSD when the timeline is loaded in Timeline Playout mode:



Additional elements can be displayed on the OSD for timelines created with IPEdit. For more information on the OSD display with these timelines, refer to the IPEdit user manual.

12.5.3 LCD Display

The same information as in the Timeline Edit mode is displayed on the Remote Panel:

```
TL13 <NAME>     LEFT=00:00:00:00

V * 112B 01/04 00:00:25 11:15:15:11
A1* 113B 02/04 00:07:13 11:15:10:08
A2* 113B 02/04 00:07:13 11:15:10:08
```

The **ABCD** Soft keys on the Remote Panel are as follows:

Video	Audio 1	Audio 2	Edit

The user can press the **D** key to access the Timeline Edit mode, or press the **PLST** key.

12.6 Editing Operations

The timeline editing operations on the remote require marking IN and OUT points on the recorder before performing the extend or insert actions. These IN and OUT points can be marked anywhere on the timeline as in the Replace mode since the timeline is equivalent to a record train.

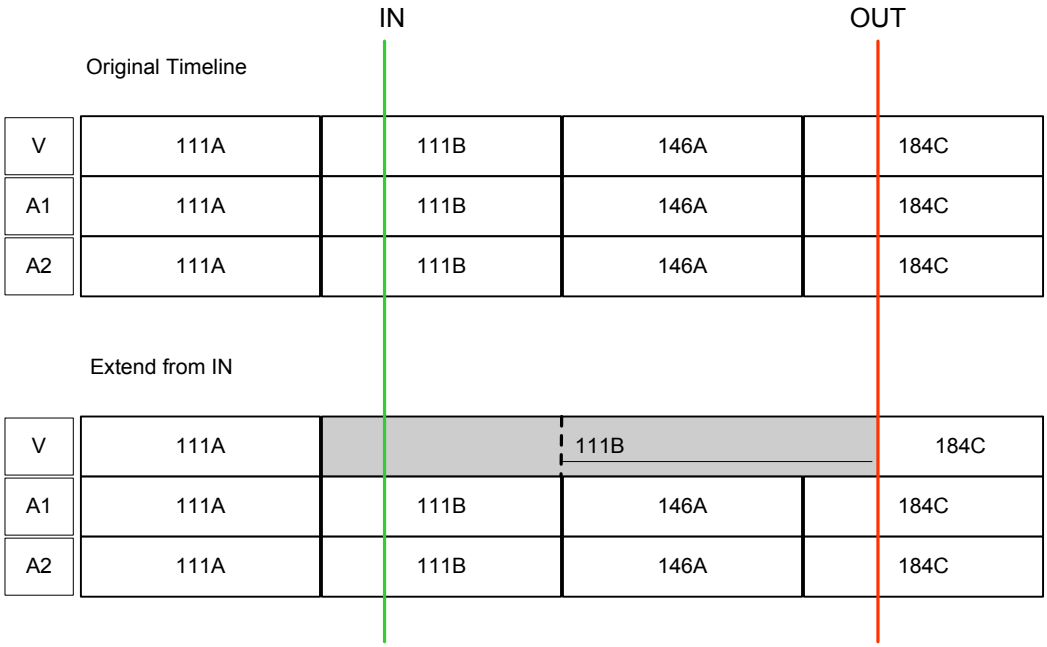
12.6.1 Extend Overwrite

The Extend feature in Multicam consists in extending the length of a timeline element by extending the IN or OUT points of a clip as explained below, as long as the material is available.

If the required material is not available, the Remote Panel will beep. The Extend is always performed in Overwrite mode, which means that the material 'covered' by the Extend is deleted from the timeline.

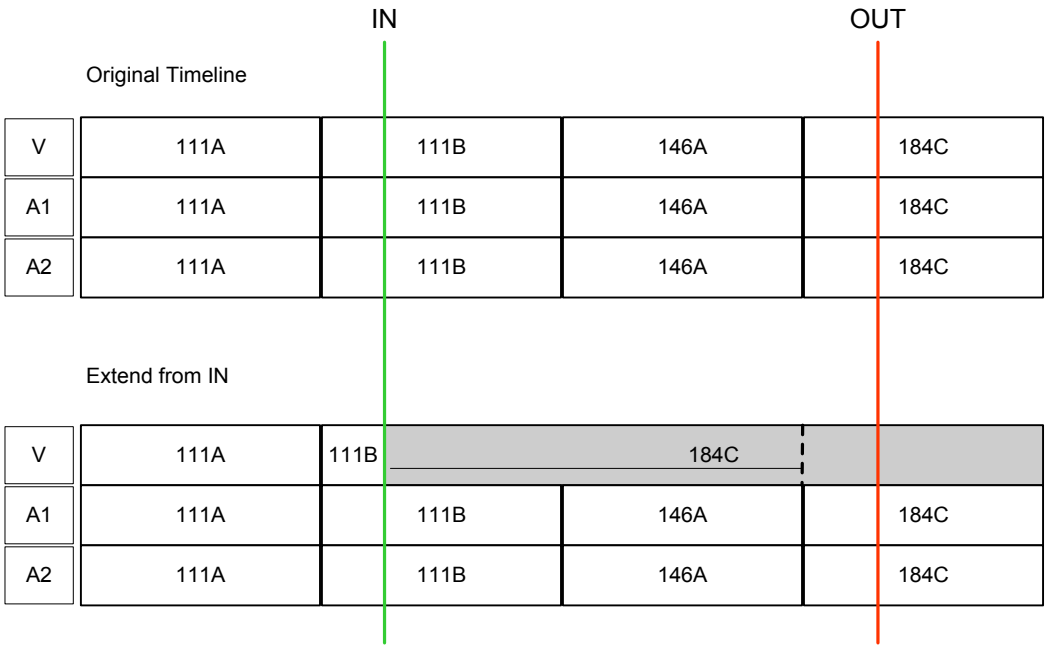
Extend From IN

This editing action shifts the OUT point of the timeline element which includes the Mark IN to the defined Mark OUT. The following schema shows an example with only the video track selected.



Extend From OUT

This editing action shifts the IN point of the timeline element which includes the Mark OUT to the defined Mark IN. The following schema shows an example with only the video track selected.



How to Perform an Extend

To perform an Extend on the Remote Panel, proceed as follows:

1. Recall the requested timeline by selecting its page (SHIFT+Page+F_ key) and bank (SHIFT+F10) and the timeline position (**F_** key).
2. Press **PLST** to load the timeline in Timeline Edit mode.
3. Use the jog dial to position on the requested Mark IN point and press the **IN** key.
4. Use the jog dial to position on the requested Mark OUT point and press the **OUT** key.

   'IN' and 'OUT' are displayed on the OSD.
   The Extend option is displayed on the LCD menu:

Video	Audio 1	Audio 2	Extend

5. Press the **D** key (Extend) on the Remote Panel to perform the Extend action.

   The LCD display and menu changes become the following one:

Extend?
[Menu]: Cancel [Enter] : Confirm
From In From OUT

6. Press the **A** (Extend from IN) or **B** key (Extend from OUT) to select the Extend action.

12.6.2 Insert Overwrite

Definition

The Insert feature in Multicam consists of inserting new material within the timeline. The timeline is loaded on the recorder and the new clip to insert is loaded on the player.

The Insert is always done with three points; this means that at least three marks must be defined on the recorder and on the player for Multicam to be able to perform the Insert action:

	IN	OUT
Recorder	X	X
Player	X	

	IN	OUT
Recorder	X	X
Player		X

	IN	OUT
Recorder		X
Player	X	X

	IN	OUT
Recorder	X	
Player	X	X

How to Perform an Insert

To perform an Insert on the Remote Panel, proceed as follows:

1. Recall the requested timeline by selecting its page (SHIFT+Page+F_ key) and bank (SHIFT+F10) and the timeline position (**F_** key).
2. Press **PLST** to load the timeline in Timeline Edit mode.
3. If desired, use the jog dial to position on the requested Mark IN point and press the **IN** key.
4. If desired, use the jog dial to position on the requested Mark OUT point and press the **OUT** key.

   At least one IN or OUT needs to be defined on the timeline.
5. Press the Preview Control key (**PRV CTL**) to access the player.
6. Recall the clip containing the new material to insert.
7. Place an IN and/or OUT mark in the clip.
8. When the three IN and/or OUT marks have been defined on the timeline and the clip, press **INSERT** or **TAKE** on the Remote Panel to execute the Insert.

A portion of the clip selected on the player has been inserted:

- between the IN and OUT marks defined in the timeline
- after the IN mark defined in the timeline
- before the OUT mark defined in the timeline.

12.6.3 How to Add a Clip to a Timeline

From the Remote Panel, you can add a clip at the end of a timeline created either with IPEdit or with Multicam.

To add a clip to a timeline, proceed as follows:

1. Recall the requested timeline by selecting its page (SHIFT+Page+F_ key) and bank (SHIFT+F10) and the timeline position (**F_** key).

   This becomes the current timeline.

2. Recall the clip to insert at the end of the timeline by selecting its page, bank and position.

3. Press the **ENTER** key on the Remote Panel.

   The clip is inserted at the end of the timeline.

13. Operating on XNet Network

13.1 Introduction

The XNet Network is set up in the EVS application. For more information, on how to set up the XNet Network and connect to the XNet network, refer to the section 'XNet SDTI Network' in the Multicam Configuration manual and to the XT Tech Ref Software manual.

13.2 Disconnecting from XNet

When you work on the XNet Network and exit Multicam, the system checks if other systems are still connected to your server.

In this case, the following message appears:

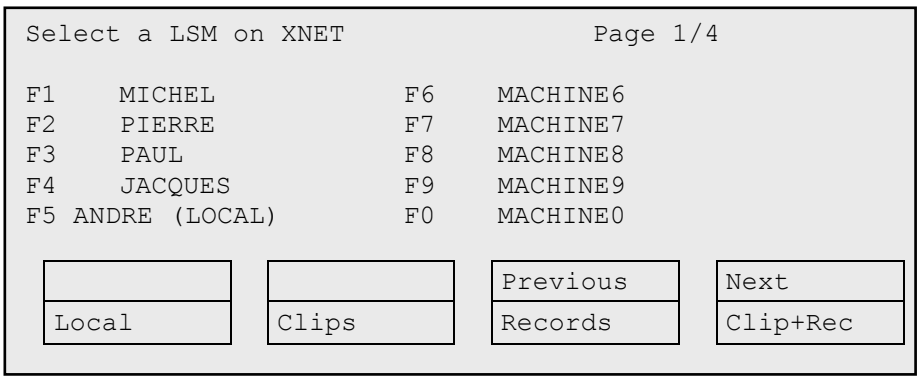
```
Other users are connected to your LSM
on XNet network. Are you really sure that
you want to close the Multicam application ?
[ESC] =CANCEL                [ENTER]=YES
```

Press **ESC** to cancel the command and return to the application.

Press **ENTER** to exit the Multicam application.

13.3 Selecting a Server on XNet

Selecting the **NETWORK** key (SHIFT+PLAY on the Remote) displays the Network menu:



The LCD screen of the Remote displays the complete list of available systems on the network. The list is organized by the order of connection to the network. Up to 4 pages are available to display up to 31 servers.

The **PREVIOUS** and **NEXT** keys appear only when some machines are not visible on the current page.

Local mode

The local system is identified with the Local sign after the name of the system. The **Local** function (**A**) gives direct access to the Local mode and is highlighted when Local mode is activated.

Clips Mode

The **Clip** function (**B**) allows the operator to connect to the clip banks of another LSM connected to the network. In other words, the VGA clip screen and the **F_** keys of the Remote show the clips from the selected LSM. If the operator presses the **RECORD** key, he goes in Live mode on the local record trains.

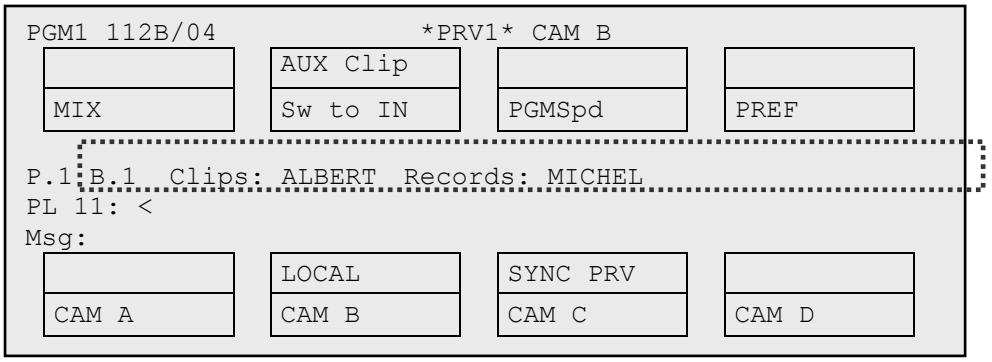
Records Mode

When the operator selects one of the LSM in the network menu, he connects the record trains to this LSM. This means that the next time he presses the **Records** function (**C**) the active channels will go in Live mode (or Near Live mode for remote trains[1]) on the record trains of the selected LSM. The clips remain connected to the LSM they were connected to.

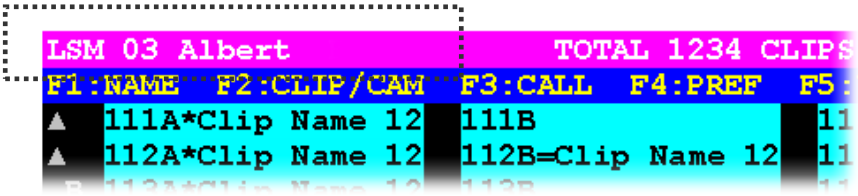
Clips+Records Mode

The **Clip+Rec** function (**D**) allows the operator to connect both to the clips banks and to the record trains of a remote server. The VGA clip screen and the **F_** keys of the Remote Panel show the clips from the selected server. The next time the operator presses the **RECORD** key, the active channels will go in Live mode (or Near Live mode for remote trains) on the record trains of the selected LSM.

Select the function key corresponding to the remote system, then the LCD display returns to the normal mode:



The names of the remote systems are now displayed after the Page and Bank information and in the Title bar of the Clip screen.



Note

It is possible from the VGA to connect back to the last machine connected by pressing ALT+<TAB>.

13.4 Operations

When the remote system is selected, the operation with remote clips or remote trains is similar to the operations on the local system.

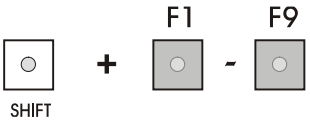
13.4.1 How to Recall/Play Back a Remote Clip

To recall/play back a remote clip, proceed as follows:

1. Select the Clip mode in the **Network** menu.
2. Select the Remote LSM from the list:

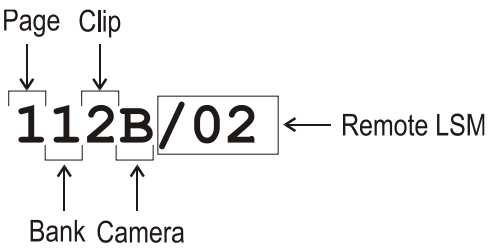
   The LCD display returns to the normal mode
3. Select the clip page 1, 2, 3 … to 10 (**PAGE** key).

   When selecting a server, it will automatically reconnect to the page and bank that was last used.
4. Select the bank in which the desired clip is located



5. Choose the required clip (**F1 - F10**).
6. If all clips are present (from Camera A, B, C and D), they will appear in their respective locations (Channel A, B, C or D).

The label of a remote clip is different in order to identify it easily among other clips:



13.4.2 How to Name a Remote Clip

To name a remote clip, proceed as follows:

1. Select the Clip mode in the **Network** menu.
2. Select the Remote LSM in the list.
3. Go to the Clip screen on the VGA, all banks of remote system are now displayed.
4. Select the clip to name.
5. Type the desired name on the keyboard.
6. Press **F1** to name the remote clip.

   → In CAM mode, only the camera where the cursor is located is named

   → In CLIP mode, all cameras of the clip where the cursor is located are named.

Note

To be able to rename a clip on a remote server, the **Clip Edit by Network** parameter must be enabled in the **Setup** menu.

13.4.3 How to Modify IN/OUT Points of a Remote Clip

To modify IN/OUT points of a remote clip, proceed as follows:

1. Recall the desired clip.
2. Browse inside the clip until you reach the desired frame.
3. Press **IN / OUT** to mark a new Short IN / Short OUT points.

Note

To be able to trim a clip on a remote server, the **Clip Edit by Network** parameter must be enabled in the **Setup** menu of the remote machine.

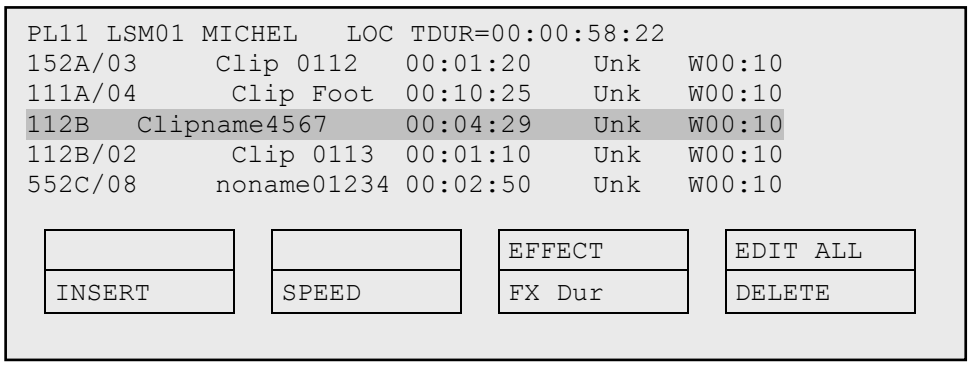
13.4.4 How to Insert Remote Clips into a Playlist

To insert remote clips into a playlist, proceed as follows:

1. Select the Remote LSM via the **Network** menu.
2. Select a remote clip in the banks.

   The corresponding **F_** key lights red.
3. Press **ENTER** on the Remote.
4. Repeat the three first steps as many times as necessary until the last clip is entered.

In Playlist Edit mode, the remote display gives all needed information regarding this playlist and this information is updated each time a clip is stored in the playlist.



13.4.5 How to Roll a Playlist with Remote Clips

To roll a playlist with remote clips, proceed as follows:

1. Once the playlist is cued and ready to roll, select the playlist from the playlist bank.
2. Press the **PLST** key on the Remote Panel.
3. Move the lever to start the playback or press the **PLAY** key.

Clips Unavailable on the XNet Network

While the playlist is rolling on air, a remote clip might be unavailable due to a network problem or simply if the Remote LSM has left the network. In this case, the clip is marked as 'NOT AVAILABLE' on the playlist screen and is skipped when the playlist is rolling. If a clip is available again, it will re-appear automatically and be played at the right position in the playlist.

Unavailable clips are shown on the VGA monitor but not on the LCD of the remote.

The operator can decide to definitively remove the unavailable clips from all local playlists by using the **Clr Unav.** function **(SHIFT+B**) in Playlist Edit mode. Note that this function is only visible when unavailable clips are present and with Split Audio Editing turned off.

13.4.6 How to Create Local Clips with Remote Record Trains

To create local clips with remote record trains, proceed as follows:

1. Select the **Records** mode in the **Network** menu.
2. Select the Remote LSM in the list.

   The LCD display returns to the normal mode
3. Press the **RECORD** key to select the Live mode.

   A two to three-second delay to Live has been defined to ensure safe operations.
4. Use the JOG key to go in search mode.
5. Change camera angles if necessary. The changing camera angles on network train will always switch in pause on the new camera.

   Refer to the note below about the remote camera name.
6. Press the **IN** key to mark your Short IN point of the clip.
7. Search the Short OUT point and press the **OUT** key to mark it.
8. Select the clip location to store and press the corresponding **F_** key.

Note

The label of the remote camera is different in order to identify it easily

Note

The key flashes during transfer. When the key lights green, the transfer is completed and the clip is available for playback from the local system.

13.5 Working with Mapped Network Cameras

If you have activated the **Authorize cam mapping** parameter (p.10.1 F1) and defined mapped network cameras (p.10.1) in the **Operational Setup** menu of the Remote Panel, you can use other network cameras as if there were local cameras.

The clipping on mapped cameras follows the same rule as for local cameras. Clips created will be copied as local clips in the corresponding positions.

Two limitations must be noted in the mapped camera mode:

- All cameras are delayed so that in Live mode all cameras are on the same timecode.
- Recalling local clips will not be instantly available: the network copy of the remote cameras will occur before the clip can be recalled.

14. Paint Mode

14.1 Introduction

Note

The Paint mode is a software option, which requires the license code 114 being installed. For more information on the required license key, contact the Support or Sales teams.

The Paint mode is not available on EVS servers working with 10-bit codecs.

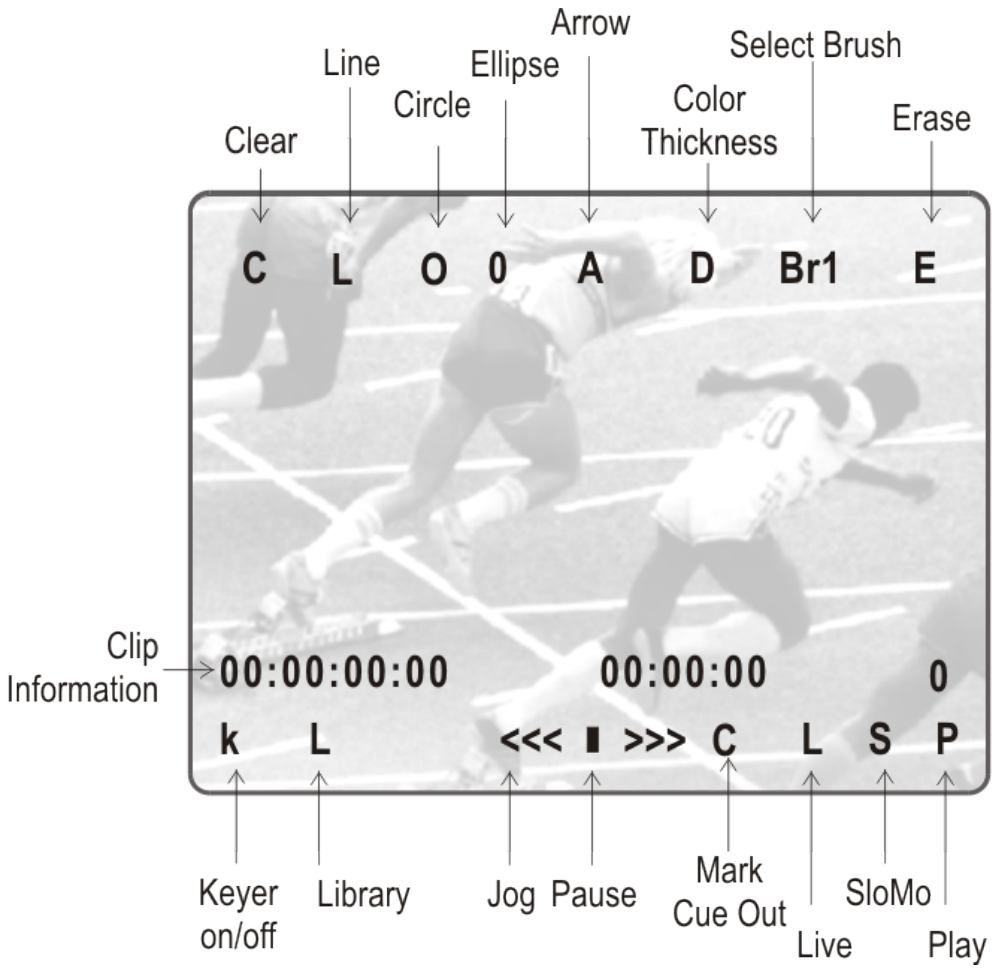
The functionality of this software package can be operated using the tablet and the stylus, or a touch screen. The normal pointing device is the tablet. It is selected in the **Setup** menu.

Change the **Pointing device** parameter in the **Operational Setup** menu (p.9.2 F2) to toggle between the tablet and the touch screen (only when the touch screen is available). The touch screen must always be connected to the RS422 port #6 and defined with the **RS422 #6** parameter in the **Operational Setup** menu (p.T2.2 F6).

The use of the Loop function allows the operator to record the effect back into the 1st record channel of the server, and to create a clip with the paint feature. Rolling a clip while in the Loop mode, in Painting, and dissolving paint image on/off allow for a very powerful feature.

14.2 Paint Mode Monitor Display

This section presents the available functions on the Paint Mode monitor display. For more information, refer to the subsections below.



Displayed letter	Function
C (clear)	Clears screen.
L	Enables line mode («one-shot»). See also Section 14.3.
C / c (circle)	Selects large / small circle («one-shot»). See also Section 14.3.
A	Automatic arrow at end of freehand drawing. See also Section 14.3.
D	Selects brush color and thickness. See also Section 14.3.
Br1 / Br2	Toggles between Brush1 and Brush2.

Displayed Letter	Function
E	Erases unwanted portion of graphic. See also Section 14.3.
k / >k<	Keyer off / on. See also Section 14.3.
L	Calls the Library module where drawing, logos, … can be saved.
C	Marks CUE OUT point on current clip.
S	Plays back the clip at slow motion speed. The speed of slow motion is predefined in the **PGM Speed/Var max** parameter in the Operational Setup menu (p.9.1 F3).
P	Plays back the current clip at normal speed

The clip countdown displays the field time. This means that the countdown matches the slow motion speed.

Note

Selecting **C** (clear) from the monitor enters the Clear menu and the DFC menu. DFC menu allows you to select the brush color from a YUV color palette

If working in network mode, Painting can be performed on remote clips as well as on local clips.

14.3 Function Description

Straight Line / Broken Line Drawing (L)

Select **L** on the Paint Mode monitor display**.** You will then be prompted to enter the first point of the line.

Place the pen at the start point and press lightly. Then place the pen at the next point and press lightly again. A straight line appears to connect these 2 points. Repeat this as many times as necessary until the line is complete, then place the pen over the “ESC” area in the top right corner of the OSD and press lightly. The system automatically defaults back to Freehand Drawing mode.

Circle Drawing (O)

Select this menu to draw circles.

A menu allows you to choose between the following options:

- **Set centre (default):** A pointer appears on the screen to let you choose the centre of the circle. The radius will be the one last used or the default one if none has been defined before.
- **Define:** This option allows you to change the size of a circle.

  Click on the **Define** menu and follow the instructions:

- Set the centre of the circle
- Set the radius

You can then choose to save or not the new circle:

- **ESC:** no circle is drawn.

Ellipse Drawing (0)

Select this menu to draw ellipses. A menu allows you to choose between the following options:

- **Set centre (default):** a pointer appears on the screen to let you choose the centre of the ellipse. The shape will be the one last used or the default one if none has been defined before.
- **Define:** allows you to change the shape of an ellipse, click on the **Define** menu and follow the instructions:
  - Set the left corner.
  - Set the opposite corner.

You can then choose to save or not the new ellipse.

- **ESC:** no ellipse is drawn.

Arrow (A)

Select **A**. When you draw on the tablet and remove the pen, a «neat» arrow appears at the end of the line. This facility remains «on». Select **A** again.

Color & Density (D)

Select **D** on the Paint Mode monitor display. Choose the desired color from the display, then choose the desired thickness.

This will be stored as **Br1** or **Br2** depending on which one is currently selected when entering the **D** option. Thus, two types can be stored.

Erase (E)

Selecting **E** on the Paint Mode monitor display allows the pen to be used as an eraser. This facility remains «on». When no longer required, select **E** again to disable it and return to the previous active drawing mode.

Clear (C)

Selecting **C** on the Paint Mode monitor display allows clearing of the entire drawing. Once selected, you can choose between 3 options: **Clr** to clear, **DfC** to define customized colors or you may escape (**ESC**) this function without clearing any drawing.

If you select **Define Colour** (**DfC**), a new screen will appear including a U-V selection area, and an Y level selection area. Select first the color you want to edit on the top of the screen, then select the U-V and Y values by moving the pen on the right location of each selection area. When the adjustment is made, move the pen to an empty zone of the screen.

The **CLEAR** function is also available from the Remote Panel (SHIFT+B) No confirmation

is required.

Keyer (K)

Can be selected with the pen, click on **K** (arrows appear/disappear) on the Paint Mode monitor display, or press SHIFT+A on the Remote Panel menu. This feature will cause the drawing to dissolve on and off using the **Paint/target transition** parameter in the **Operational Setup** menu (p.12.1 F1).

Library (L)

Selecting **L** allows entering into a library where the user can load or save entire drawings and logos.

15. Target Mode

15.1 Introduction

Note

The Target mode is a software option, which requires the license code 114 being installed. For more information on the required license key, contact the Support or Sales team.

The Target mode is not available on EVS servers working with 10-bit codecs.

This software option enables the tracking of an object/action by use of a circle, arrow, ellipse or rectangle[1], focusing the attention on certain details. The user can choose the size, color and thickness of the border as well as the darkness of the background for a highlight feature. The addition of the Loop function allows the operator to store this effect as a clip.

The facilities within this software package can be operated using the tablet and the stylus, or a touch screen. Change the **Pointing device** parameter in the Operational Setup menu (p.9.2 F2) to toggle between the tablet and the touch screen (only when the touch screen is available). The touch screen must always be connected to the RS422 port #6 and defined with the **RS422 #6** parameter in the Operational Setup menu (p.T2.2 F6).

[1] In this chapter, we use the words “tracking object” to refer to the type of shape selected by the operator (circle, arrow, ellipse or rectangle).

15.2 Creating a Target Track

Begin by selecting all the appropriate types of tracking object, their size, color, etc.

15.2.1 Selecting the Type of Tracking Object

The character on the left of the "T" letter on the 1st line of the OSD shows the current object:

O (letter "o")	Indicates a circle (default option)
0 (zero)	Indicates an ellipse
↓ / ↑ / → / ←	Indicates an arrow
▮	Indicates a rectangle
Z	Indicates the zoom mode is active (circle only available in this mode)

15.2.2 Selecting Other Parameters of the Tracking Object

T:	Selects the background shade (Transparency level).
E:	Selects the border thickness (Edge).
S:	Selects the size of the tracking object (Size).
C:	Selects the border color (Colour).

Note

To select the size of the tracking object when it is a rectangle or an ellipse, click on **S** on the first line of the OSD. You must define the position of two opposite corners of the rectangle (in case of an ellipse, you must define the opposite corners of the rectangle the ellipse is enclosed in). When these two corners are defined, the system draws the resulting rectangle or ellipse. You can confirm by clicking on **OK** or clear the screen by clicking on **CLEAR** and redefine a new shape.

15.2.3 How to Highlight Video Material

To highlight video material, proceed as follows:

1. Select the material that you wish to highlight (this may be a clip, or simply a cued replay).
2. Position the material on the field corresponding to the target start point and place the pen on the tablet.

   At this point the tracking object will appear on the screen. If the tracking object is an arrow, it will appear slightly off the cursor position, so that the object remains visible.
3. When the circle is positioned correctly, mark a keyframe:
   - by pressing the button of the stylus,
   - by clicking on the **M** sign on the monitoring screen

   The **K** will now appear in the upper left corner indicating that a keyframe has been marked.
4. Re-position the material, and mark the next keyframe, and so on...

When the final keyframe has been marked, the replay can be re-cued.

When the replay is animated, the illustration will appear with a dissolve effect at the first keyframe and disappear, with a dissolve effect, at the last.

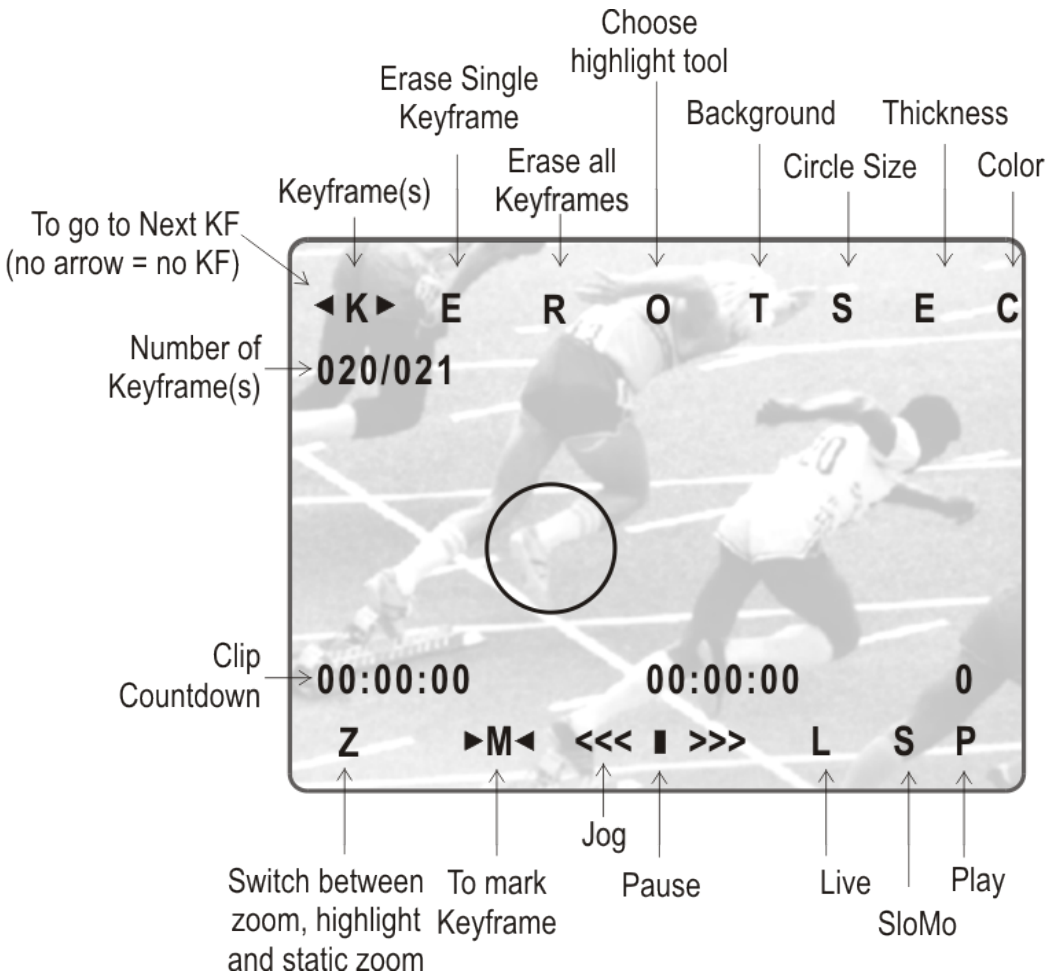
Run through the material in Loop mode and the effect can now be retrieved and stored as a new clip with the target tracking.

This can be repeated several times to include multiple circles. Refer to the ‘Loop’ explanation on page 19.

15.2.4 Rules When Using Keyframes

1. The first / last keyframes can be at the IN / OUT points of the clip.
2. If, when a replay is viewed, the action is not accurately followed, stop the replay where the tracking object has drifted away from the target and use the pen to move the circle to the correct point, marking an additional keyframe. This can be done as many times as necessary.
3. When checking / modifying a track, the arrows that appear at the bottom left of the screen may be used to select the next/previous marked keyframe.
4. If one keyframe is to be erased, use the arrows to get to the appropriate keyframe and then select **ERASE** (**E**). Erasing ALL keyframes can be done using **RESET** (**R**).
5. If working in network mode, target tracking can be performed on remote clips as well as local clips.

15.3 Target Mode Monitor Display



Displayed Letter	Function
T	Selects the darkness of the background (8 choices).
S	Selects the size of the circle (8 choices) .
E	Selects the border thickness (8 choices).
C	Selects the border color (8 choices).
<K>	Indicates a keyframe has been marked on current field.
E	Erases currently displayed keyframe.
R	Erases all keyframes in the current clip.
Z	Toggles between Zoom, Static Zoom and normal highlight.

Displayed Letter	Function

M	Allows you to mark a keyframe directly from the touch screen or from the tablet. If this option is active, touching a point on the screen automatically creates the keyframe. This option becomes inactive after each keyframe creation.
C	Marks CUE OUT point on current field.
S	Starts slow-motion (preset in Prg Spd).
P	Plays back the current clip.
<<< >>>	Searches the material (clip or live recording). A single click with the stylus move one frame forward or one frame back.

Zoom Options

On the Remote Panel display, selecting the **Zoom** option (soft key **A)** on the Remote will cause the tracking object to be changed to the Zoom function. The circle will magnify 4x the highlighted area of the image. This is a great feature for showing, for example, a close call like a foot on a line or a ball in/out of bounds.

Note

The dissolve effect is not available when using the Zoom effect. The **T**, **S**, **E** and **C** parameters are not available either in Zoom mode.

Selecting **Zoom** again will switch to Static Zoom mode. Keep in mind, when selecting the Zoom option, that the software will take a few seconds to apply the change.

The Static Zoom allows the user to zoom an area of the picture via a picture in picture display.

In the Static Zoom mode, at the bottom left of the screen, a “P” appears on the OSD to

define the position of the static zoom.

Just click on the **P** and move the cursor to indicate where the static zoom should be.

Keyframe Information Display

On the OSD, a second line is added to indicate the number of keyframes marked and the position of the current keyframe.

The information displayed can be interpreted as follows:

Display	Meaning
---/---	No keyframes are defined.
---/021	21 keyframes are defined but the user is not on a keyframe.
012/021	21 keyframes are defined and the user is on keyframe 12 of 21.

Transparency Options

Select the last choice in the transparency options to set the background in black and white.

16. Offside Line Mode

16.1 Introduction

16.1.1 Definition and License Code

Note

The internal Offside Line mode is a software option, which requires the license code 114 being installed. For more information on the required license key, contact the Support or Sales teams.

The internal Offside Line mode is not available on EVS servers working with 10-bit codecs.

The internal Offside Line mode makes it possible to make the offside line visible on the screen by shading a portion of the pitch. You can use this feature on clips or trains loaded on the PGM1. This effect can then be recorded in the loop of the server and reinserted in the feed of a recorder channel.

The external Offside Line mode offers a more advanced offside line feature, as well as other live tools, when the EVS server is used in combination with the Epsio application. For more information, refer to the Epsio user manual.

16.1.2 Activating the Offside Line Mode

To activate the Offside Line mode, you need to set as follows the parameters in the **Operational Setup** menu on the Remote Panel:

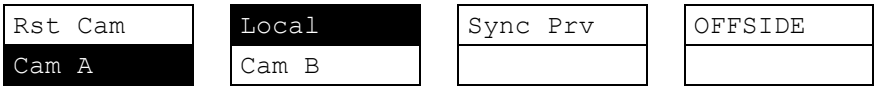
The **Offside Line** parameter (p.12.3 F1) has to be set to 'Yes'.

The **External Offside** parameter (p.12.3 F2) has to be set to 'No'.

When you activate the offside line, you can no longer use a second controller.

16.1.3 Accessing the Offside Line Mode

When the offside line mode is active, the Offside Line option is available from the operational menu in the PGM/PRV or Multi PGM mode:

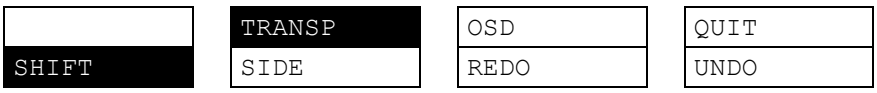


You access this mode by pressing the SHIFT+D key.

16.1.4 Overview on the Offside Line Commands

Main Menu

The offside line menu displays as follows and the **Mark** key is blinking:



The following table summarizes the various available commands:

OSD Command	Meaning
SHIFT/TILT (A)	Moves the line horizontally (Shift) or around its pivot point (tilt).
SIDE (B)	Changes the shaded area from side.
REDO (C)	Redoes the last undone action. You can redo the last 10 undone actions.
UNDO (D)	Undoes the last action. You can undo the last 10 actions.
TRANSP (SHIFT+B)	Allows the user to change the transparency level with the jog or lever. Press **Enter** to validate the action.
OSD (SHIFT+C)	Allows the user to hide or display again the information on the OSD.
QUIT (SHIFT+D)	Exits the offside line mode.

Secondary Menu

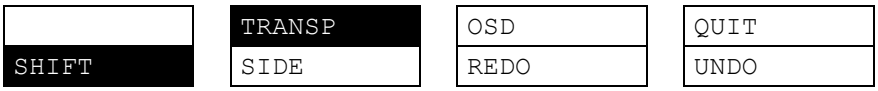
Pressing the **MENU** key opens a secondary menu that allows you to specify the following offside line settings:

Setting	Description
Pause duration	Time (in frames) between the train or clip is paused and the offside line mark is displayed.
Fade in/out duration	Duration (in frames) of the fading effect on the IN and OUT points of the offside sequence.
Preroll duration	Preroll (in seconds) before the offside sequence automatically defined as a cue when the sequence is saved.

16.2 How to Mark an Offside Line

To mark an offside line on a clip or record train, proceed as follows:

1. Load the clip or train on the PGM1 and jog to the position where the offside line should be marked.
2. Press SHIFT+D to access the offside line menu:



   The **SHIFT** function is active by default.
3. Jog to position the line horizontally with the SHIFT function active.
4. Press the **A** key to toggle from the SHIFT to the TILT function.
5. Jog to tilt the line to the requested angle with the TILT function active.

   If desired, you can move the position of the pivot point used to set the inclination of the line.
6. From step 3 to step 5, you can redefine the frame at any time by pressing **PRV CTL** and jogging to the requested frame. Click again **PRV CTL** to continue to edit the offside sequence.
7. Once the 1st line is set, press **TAKE** to fix it.
8. If desired, you can then jog to move the pivot point and press **TAKE** a second time. Then you can jog to break the line and change its inclination from the pivot point.

   You can repeat this step several times to precisely delimit an offside zone on the pitch.
9. At any time, you can do one of the following:
   - Press the **B** key (Side) to change the side of the shaded area for the offside zone along the offside line. By default, this is defined on the left of the offside line.
   - Press the SHIFT+B key (Trans.) to change the transparency of the offside zone with the lever or the jog.
10. Press **Mark** to validate the line position.

The offside line is marked and can be replayed as long as you are in the Offside Line mode.

If you want to define another offside sequence, you need to quit the Offside Line mode and come back to it.

16.3 How to Edit an Offside Line

Once the offside line has already been created, you can still load the sequence and edit it.

To edit an existing offside sequence, proceed as follows:

1. In the Offside Line mode, press **Last Cue** until you reach the cue corresponding to the requested offside sequence.

   The following menu is displayed on the Remote Panel:

		OSD	QUIT
EDIT	SIDE		UNDO

2. Press the **A** key (Edit).
3. Jog to move the pivot point to the position where you want to break the line.
4. Press **TAKE** to fix the pivot point.
5. Jog to break the line and change its inclination from the pivot point.
6. Repeat steps 3 to 5 for each new pivot point you want to define.
7. Press **Mark** to validate your changes.

16.4 How to Play the Offside Sequence

Once the offside line has been defined, you can play it as long as you are in Offside Line mode. It will be played based on the settings defined in the secondary menu. For more information, see the section 16.1.4 ‘Overview on the Offside Line Commands’, on page 166.

To play back an existing offside sequence, proceed as follows:

1. In the offside mode, press **Last Cue** until you reach the preroll cue for the requested offside sequence.
2. Press **PLAY** to play the sequence.

The offside sequence is replayed according to the speed defined by the operator. When the sequence reaches the keyframe, it is paused and the offside line is displayed according to the fade in/out duration and the pause duration defined in the secondary menu. You need to move the lever or press **PLAY** on the Remote Panel.

16.5 Cue Points Related to Offside Sequence

When an offside sequence is created, a cue point is automatically defined on two positions:

- The position where the offside line is defined.
- The position corresponding to the preroll before the outside sequence.

When the offside mode is active, the user can press **Last Cue** to find back one of these cues related to the offside sequences. Once you have reached the first cue in the train or clip and press again on **Last Cue**, you come back to the last cue.

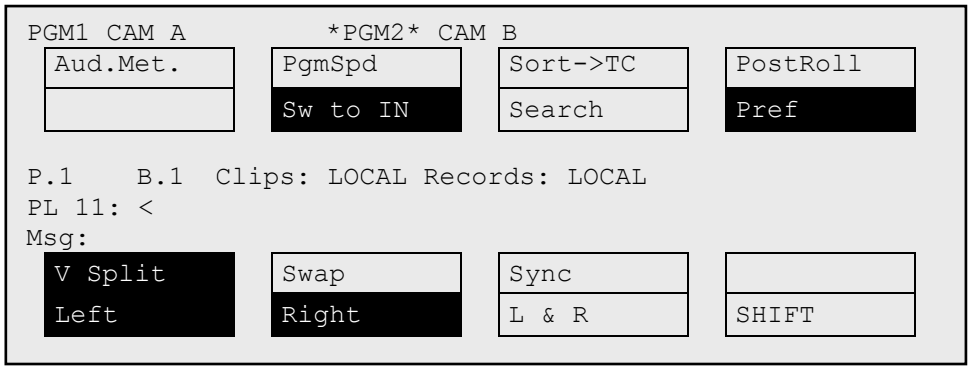
17. Split Screen Mode

The Split Screen mode, which is a software option, allows a simple split screen effect on PGM 1. This mode operates very similarly to the 2PGM mode, except that the two outputs are now left and right parts of the screen (vertical split screen) or top and bottom part of the screen (horizontal split screen) or mixed together on the entire screen (Split Mix mode). The Split mode also allows for DVE-like adjustment of the video within the split effect, for optimum positioning of the material.

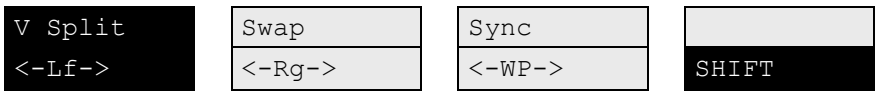
Note

The horizontal Split Screen mode is not available in HD Supermotion 3x in DVCPro HD and MPEG 2 i-frame 1080i.

17.1.1 Vertical Split

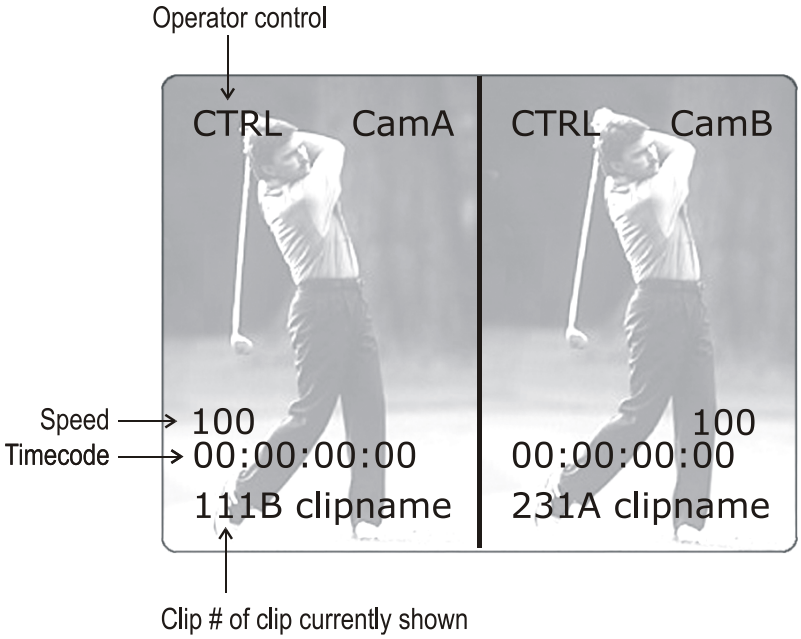


Press the **SHIFT** key (**D**) to switch between normal and special commands:



Command	Description
LEFT	To control the left part of the monitor
RIGHT	To control the right part of the monitor
L & R	To control both sides together
SHIFT	Access / Exit special commands
← LF →	To centre the left picture
← RG →	To centre the right picture
← WP →	To move the separation line

Command	Description
V SPLIT / H SPLIT	Toggles between horizontal and vertical Split screen menus
SWAP	To swap sources from both sides
SYNC	To synchronize the selected PGM with the other one. Press this button and select the PGM to use as a reference.



Press the **LEFT** key to take control of the left side of the screen, and recall the desired clip for this side. Use the command knob to search inside the clip until the desired picture is reached.

Press the **RIGHT** key to take control of the right side of the screen, and repeat the same operation with the clip you want to display on the right side.

You can also shift horizontally the clips on both sides, so that the action is in the centre of the picture.

Press the **SHIFT** key (**D**) to enter this mode. The menu will change, as shown above.

Press the ← **LF** → key, and move the command knob to centre the left side picture.

Press the ← **RG** → key and do the same operation for the right side picture.

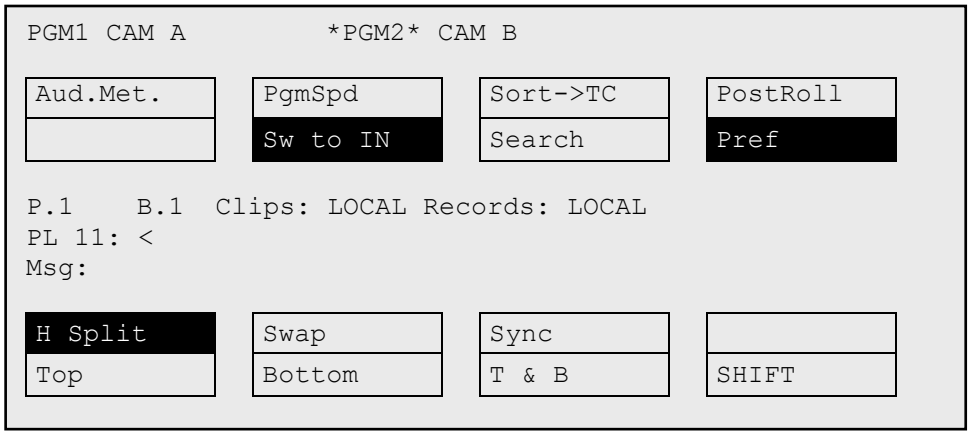
To restore the default positions, press CLEAR+← LF →, ← RG →.

Pressing the ← **WP** → key allows moving the border. To restore the default position of the border, press CLEAR+← WP →.

To exit the **SHIFT** mode, press the **SHIFT** key (**D**) again.

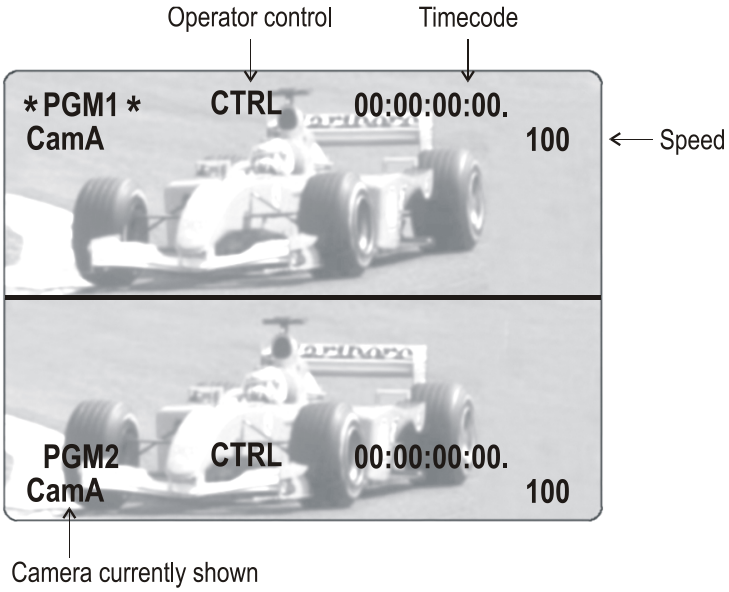
If working in network mode, split screen can be performed on remote clips as well as on local clips.

17.1.2 Horizontal Split

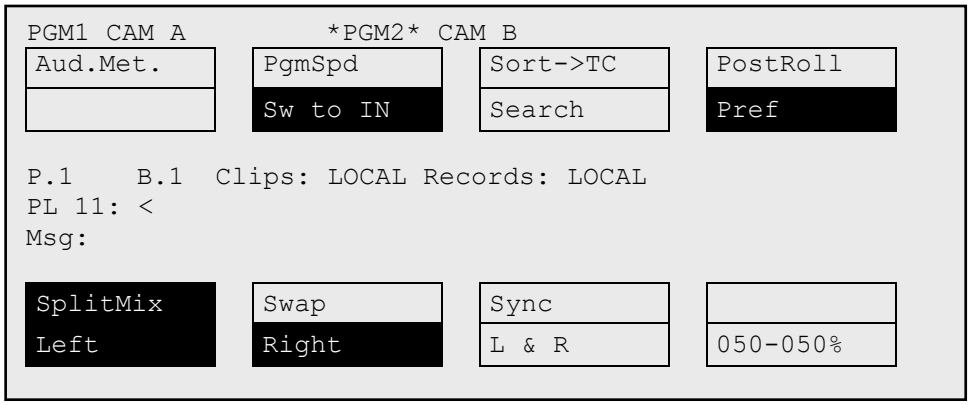


Press the **SHIFT** key (**D**) to switch between normal and special commands.

All commands are similar to the Horizontal Split Screen commands.



17.1.3 Split MIX



This mode works similar to the H and V Split modes, except that there is no position adjustment since both pictures are shown full frame.

The **D** key allows the operator to adjust the mix percentage between the two sources. Press the **D** key to highlight the function, then move the lever to adjust the mix level between the two sources.

17.1.4 Auto-tracking mode

The Auto-tracking mode applies only to the Vertical Split mode, and allows to adjust the horizontal position of a sequence to make sure it is as close as possible to the centre of the left/right part of the screen.

To use the Auto-tracking, the first step is to track the object that must be kept in the centre of the frame. Using the Target Track mode the keyframes are marked to determine the path of the object. Refer to the Chapter 15 ‘Target Mode’, on page 159 for more details.

When the tracking is completed in the desired clips, enter the Split Screen mode and recall these clips on the left and right side of the screen. If keyframes have been marked inside selected clips, the word “TRACKED” will appear on the corresponding side of the output monitor. At playback, the picture will be shifted horizontally to keep the tracked object in the centre of its frame.

To disable temporarily the auto-tracking without leaving the Split Screen mode, press CLEAR+LEFT (disables Auto-tracking on left side) or CLEAR+RIGHT (disables Auto-tracking on right side).

18. Hypermotion Mode

18.1 Introduction

18.1.1 Definition

The Hypermotion mode allows the server to control a hypermotion camera. Such cameras record images at a frame rate much higher than standard cameras.

They record a buffer of images in an internal memory. This buffer can then be ingested into an EVS server via the standard SDI connection. In doing so, a hypermotion camera is considered as a standard camera by the server.

18.1.2 Camera Differences

The aim of the hypermotion mode is to enable the use of a standard EVS Remote to control the hypermotion camera. Though most commands are identical for such cameras, the last part of this chapter lists some of the supported cameras model along with their specific features.

18.1.3 License Code

The hypermotion mode is a software option which requires the installation of the license code 20. For more information on this required license key, contact the Support or Sales team.

18.1.4 Activating the Hypermotion Mode

To access the hypermotion mode, you should ensure that:

- The mandatory license code is activated.
- The **Hypermotion** parameter is activated in the **Operational Setup** menu of the remote (p.11.1 F1), or see also the Multicam Configuration manual.
- You have correctly selected the number of remotes in the main menu according to the **Remote mode** parameter defined in the **Operational Setup** menu of the remote (p.11.1 F3), or see the Tech Ref Software manual.

  Depending on the selected **Remote mode**, you will control the hypermotion camera only or the hypermotion camera and a PGM of the server.

18.2 Menus

18.2.1 Accessing and Leaving the Hypermotion Mode

To access the hypermotion menu, press SHIFT+D (**HyperMo**) in your Remote perational menu.

To leave the hypermotion menu or switch to the PGM control, press again SHIFT+D in the operational menu.

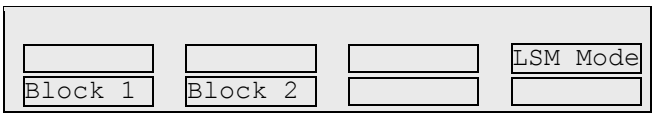
Note

In hypermotion+LSM mode, the **D'** key displays **LSM Mode**.

18.2.2 Hypermotion Main Menu

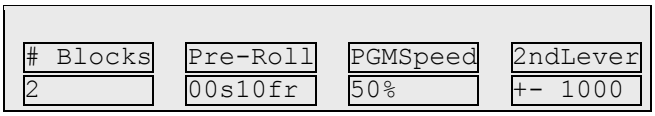
The hypermotion main menu displays the memory blocks that have been selected in the **# Blocks** parameter of the hypermotion secondary menu. The memory blocks use is described later in this chapter.

Only the activated blocks will be displayed and the highlighted block is the one the operator is currently working on.



18.2.3 Hypermotion Secondary Menu

From the hypermotion main menu, press the **MENU** key to open the hypermotion secondary menu illustrated hereunder.



This secondary menu lists the hypermotion settings described in the table below. To modify a setting, press the corresponding softkey and jog to select the requested value.

Setting	Description	Values
# Blocks	Number of memory blocks of the hypermotion camera to be used, if the connected camera supports this feature. The number of blocks displayed in the main menu depends on the number of blocks specified in this parameter.	1 to 4 (default: 1)
Pre-Roll	Length of the pre-roll for the cue points defined on the material recorded from the hypermotion camera. The **Last Cue** command will go to the desired TC - pre-roll if the material is available. If not, the pre-roll is not applied.	From 0s01fr to 05s00fr (default: 00s00fr)
PGMSpeed	PGM speed that is to be applied for playing back material recorded on the hypermotion camera using the **SHIFT+PLAY** keys.	50, 100, 200, 300, 400, 1000 (see note) (default: 100)
2ndLever	Secondary lever range to be applied for playing back material recorded on the hypermotion camera.	0-1000, +- 1000 (default: +-1000)

Note

The 1000 value for **PGMSpeed** is not available for all camera models.

18.3 Controlling the Hypermotion Camera from the Remote

18.3.1 Introduction

This section presents the various commands you can use on the remote panel to control the hypermotion camera. The corresponding command on the hypermotion camera is mentioned when available.

The standard behavior, applicable to all cameras (Photron, Vision Research and ARRI) is first explained. When a given camera has a specific behavior, this is explicitly mentioned.

18.3.2 The Remote Keys

PLAY

This key corresponds to the 'Play' command on hypermotion cameras.

Press the **PLAY** key on the remote to initiate a replay from the first available frame on the current memory block.

The corresponding CAM key flashes green to indicate the playback status.

SHIFT+PLAY

There is no corresponding command on hypermotion cameras.

Press the SHIFT+PLAY keys on the remote to initiate a replay on the current memory block at the speed defined in the **PGMSpeed** parameter.

Press again **PLAY**, SHIFT+PLAY, or **PRV CTL** to return to the normal playing speed.

The corresponding **CAM** key flashes green to indicate the playback status.

Mark

This key corresponds to the 'Mark Cue Point' command on hypermotion cameras.

With a single-block memory, press **Mark** to mark a cue point on the current block. You can mark up to 255 cue points on a memory block.

This function is not available on all cameras with multiple-block memory.

Last Cue

This key corresponds to the 'search' command on hypermotion cameras.

If cue points have been defined, press **Last Cue** to go to the previous cue point of the current memory block.

If no cue points have been defined, press **Last Cue** to stop the recording and go back to the first recorded frame of the current memory block.

RECORD

This key corresponds to the 'ARM' or 'REC' commands on hypermotion cameras.

When you press **RECORD** for the first time, all the A/V material recorded in the memory block(s) of the camera is deleted.

Please refer to the camera models specific features at the end of this chapter for more information about the behavior of your camera when pressing the **RECORD** key on a recording memory block.

TAKE

This key corresponds to the 'Trig/Stop Rec' command on hypermotion cameras.

With a single-block memory or when the last block is reached, press **TAKE** to stop the recording.

With a multiple-block memory, press **TAKE** to stop the record on the current block and automatically start the record on the first free block, if available.

Lever

There is no corresponding command on hypermotion cameras.

Press the **Lever** key to shift to the secondary lever range (defined in the **2ndLever** parameter in the hypermotion secondary menu) for material played out using the hypermotion feature.

CAM Keys

Press a CAM key corresponding to a recorded block to load the last recorded frame of the selected block in play mode.

If you press a CAM key corresponding to an empty block, the remote beeps.

CLEAR

Note

The CLEAR button is only active on some cameras.

Press the **CLEAR** key to clear the recorded material on a block. It can be used in the following ways:

- To clear the record on a given block that is not in PLAY mode, press **CLEAR** and the CAM key corresponding to the requested block.
- To clear the record on a block when the block is in PLAY mode, press **CLEAR**. The PLAY is stopped, the recorded material is deleted from the block, and the camera automatically starts recording again in this block if it is not recording on any other block yet.

18.3.3 Creating a Clip from a Hypermotion Camera

When the camera is replaying its content into the EVS server, you can clip it automatically directly from the remote controlling the camera.

Use the **IN** and **OUT** keys and the F_ keys to clip the record train corresponding to the hypermotion camera and to store it at a clip position. So you can clip the hypermotion camera without having the control on a PGM, and without having to wait for all the content to be recorded on the server.

Once you have played back the material recorded in the hypermotion camera, it is available in the record train of the camera as defined in the **Recorder** setting (p6.4, F2). You can now create clips with this material.

To do this, proceed as follows:

1. Come back to the LSM mode with **SHIFT+D** (with remote in hypermotion+LSM mode) or use another remote (with remote in hypermotion only mode).
2. Load the relevant record train on the PGM.
3. Jog in the material and add a MARK IN, MARK OUT as usual to create the requested clip.

18.3.4 Managing Cue Points

When the controller controls the camera, press **Mark** to define and set up to 255 cue points. You can add the cue points on the current block in record mode.

Press the **Last Cue** key to call back the cue points. As cue points are managed by block, select first the requested block to be able to recall the cue points defined in this block.

Please refer to the camera models specific features at the end of this chapter for more information about cue points management on your system.

18.4 Managing the Memory Blocks

18.4.1 Defining the Number of Memory Blocks

Some cameras allow the users to split the memory into several blocks of the same size. Before recording material on the hypermotion camera, you should specify how many memory blocks you are going to use (1, 2, 3, or 4 blocks). By default, only one memory block is defined.

Note

When using more than one memory block, the blocks are considered as independant units. That means that you have to manually shift from one block to the other to continue recording on the next block.

To define the number of memory blocks on a hypermotion camera, proceed as follows:

1. In the hypermotion menu, press **MENU** to open the secondary menu.
2. Press **A** to activate the **# Blocks** field. This field specifies into how many memory blocks the camera memory will be split.
3. Jog to select the number of blocks (1 to 4).
4. Press **MENU** again to validate your choice and come back to the hypermotion main menu.

The camera memory is now split into the requested number of blocks, all with the same size. The **A** to **D** CAM keys now correspond to the 1 to 4 memory blocks respectively.

18.4.2 Color Code for Memory Block Status

The memory blocks status are displayed using a common color code both directly on the corresponding CAM keys on the LSM remote, and on the OSD monitoring of the recorder corresponding to the hypermotion camera.

On the OSD monitoring, the block system is displayed as a suite of 4 squares, ■■■■, each corresponding to a memory block.

The common color code is as follows:

Color	CAM Key	Block Symbol	Memory Block Status
Steady white	Block 1	□	Empty block
Steady green	Block 1	■	Recorded block
Blinking green	Block 1	■	Block in PLAY
Steady red	Block 1	■	Block in REC

18.4.3 Working with Single-Block Memory

The general recording and playback process when controlling the camera using a single-block memory is the following:

1. Start the recording on the camera by pressing **RECORD** on the remote controlling the hypermotion camera.
2. During the recording, you can set cue points (up to 255) on the recorded material by pressing **Mark**.
3. Stop the recording in one of the following ways:
   - Press **Last cue** to position the camera on the previous cue, taking the pre-roll into account.
   - Jog the dial to position the camera on the requested image.
   - Press **TAKE** to stop the recording.
4. Press **PLAY** to start the playback.

   During the playback, the material played on the hypermotion camera is recorded into the server via the SDI connection.

18.4.4 Working with Multiple-Block Memory

The general recording and playback process when controlling the camera using a multiple-block memory is the following:

1. Press the A to D CAM key corresponding to the memory block (1 to 4) on which you want to record the material.
2. Start the recording on the camera by pressing **RECORD** on the remote controlling the hypermotion camera. The material starts recording in loop mode on a memory block.
   - If this is the first use of the **RECORD** key, all memory blocks are erased and the recording starts on the first one.
   - Otherwise, the recording starts on the currently selected memory block if this is a subsequent use of the key.
   - If no block is selected, the recording starts on the first available block.
3. Press **TAKE** to stop recording on the current block and start recording on the first free block, if available.
4. Stop the recording in one of the following ways:
   - Press **Last cue** to position the camera and cue to the first recorded frame of the block.
   - Jog the dial to position the camera on the requested image.
   - Select another block, to load the first frame recorded on this block in play mode.
5. Press **PLAY** to start the playback.

   During the playback, the material played on the hypermotion camera is recorded into the server via the SDI connection.

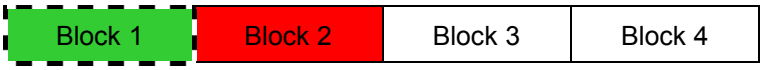
Example

The following steps provide an example for a typical use of the LSM remote commands with a hypermotion camera:

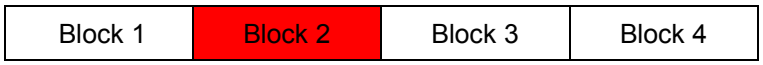
1. Initially, the blocks are recorded or empty

2. Press **RECORD** on the remote to delete any recorded material on the blocks and start the recording in loop mode on block 1 (first use of this key).

3. Press **TAKE** to stop recording on the current block, and start recording on the next available one (block 2). At the same time, the playback starts on block 1.



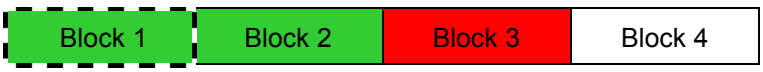
4. Press **CLEAR** to stop the playback on block 1 and delete the material recorded on that block. As the block 2 is being recorded, no record is started on block 1.



5. Press **TAKE** to stop the record on Block 2 and start it on the first available block (block 1). Playback starts on block 2.

6. Press **TAKE** again to stop the record on block 1 and start it on the first available block (block 3). The running playback on block 2 is not affected.

7. Press **CAM A** to cue block 2 at the beginning, and load the last recorded frame on block 1 in play mode. The record carries on block 3.



8. Press **CAM C** to stop the recording on block 3 and start it on the first available block (block 4). The last recorded frame on block 3 is loaded in play mode.

9. Press **TAKE** to stop the record on block 4. As no free block is available, the recording does not start on another block.

10. Press **CLEAR** to stop the play on block 3, delete the material on block 3 and start recording on block 3.

Once block 3 has been recorded, the record ends as all the other blocks contain recorded material.

18.5 Specific Camera FEATUREs

Note

The following topics describe the differences and variations of several camera models against the standard features described previoulsy in this chapter.

18.5.1 ARRI Camera Hi-Motion I

Application Start

At application start, this camera is in ARM mode and the recording starts on the first memory block.

Configuration Parameter Values

The **PGMSpeed** parameter value 1000 is available.

Key Behavior

- **TAKE**: this key is operational in ARM mode.
- **RECORD**: the remote does not beep if the CAM key refers to an empty block.
- **RECORD**: pressing this key while the current block is recording does not send any command to the camera.
- **CLEAR**: this key has no effect.

Cue points management

- When a new ARM/REC command is issued on a block, all its cue points are cleared.
- If the **Last Cue** command cannot access the desired TC-pre-roll, the player remains on the current cue point.
- If the **Last Cue** command refers to a TC that does not exist anymore, the player jumps to the beginning of the current memory block.
- Cue points can not be marked when working on several memory blocks.

18.5.2 Photron Camera

Application Start

At application start, this camera is in ARM mode and the recording starts on the first memory block.

Configuration Parameter Values

The **PGMSpeed** parameter value 1000 is available.

Key Behavior

- **TAKE**: this key is operational in ARM mode.
- **RECORD**: the remote does not beep if the CAM key refers to an empty block.
- **RECORD**: pressing this key while the current block is recording does not send any command to the camera.
- **CLEAR**: this key has no effect.

Cue points management

- When a new ARM/REC command is issued on a block, all its cue points are cleared.
- If the **Last Cue** command cannot access the desired TC-pre-roll, the player remains on the current cue point.
- If the **Last Cue** command refers to a TC that does not exist anymore, the player jumps to the beginning of the current memory block.
- Cue points can not be marked when working on several memory blocks.

18.5.3 Vision Research Camera

Application Start

At application start, the recording does not start automatically.

Configuration Parameter Values

The **PGMSpeed** parameter value 1000 is available.

Key Behavior

- **TAKE**: this key is operational in any mode.
- **RECORD**: the remote beeps if the CAM key refers to an empty block.
- **RECORD**: pressing this key while the current block is recording clears all memory blocks and starts recording on the first one.
- **CLEAR**: press this key to delete the current memory block data.

Cue points management

- When a new ARM/REC command is issued on a block, all its cue points are cleared.
- If the **Last Cue** command cannot access the desired TC-pre-roll, the player remains on the current cue point.
- If the **Last Cue** command refers to a TC that does not exist anymore, the key beeps but the OSD still displays the number of the cue that you wanted to go to.
- Cue points can be marked across several blocks but the recall is limited to the currently selected block.

  Example:

  - While recording on memory block 1, mark cue points 1, 2, and 3 on memory block 1.
  - Press **TAKE** to start recording on block 2 and mark cue points 1, 2, and 3.
  - Press **TAKE** and select memory block 2. The **Last Cue** command scrolls through the cue points of block 2.
  - To go through cue points of another block, select that block first then press **Last Cue**.
- On OSD, the first information, displayed in white, refers to the cue points on the playing block while the second information, displayed in red, refers to the recording block.

18.5.4 NAC Camera Hi-Motion II

Application Start

At application start, this camera is in ARM mode and the recording starts on the first memory block.

Configuration Parameter Values

The **PGMSpeed** parameter value 1000 is available.

Key Behavior

- **TAKE**: this key is operational in ARM mode.
- **RECORD**: the remote beeps if the CAM key refers to an empty block.
- **RECORD**: pressing this key while the current block is recording does not send any command to the camera.
- **CLEAR**: press this key to delete the current memory block data.

Cue points management

- When a new ARM/REC command is issued on a block, all its cue points are cleared.
- If the **Last Cue** command cannot access the desired TC-pre-roll, the player remains on the current cue point.
- If the **Last Cue** command refers to a TC that does not exist anymore, the player jumps to the beginning of the current memory block.
- Cue points can be marked across several blocks but the recall is limited to the currently selected block.

  Example:

  - While recording on memory block 1, mark cue points 1, 2, and 3 on memory block 1.
  - Press **TAKE** to start recording on block 2 and mark cue points 1, 2, and 3.
  - Press **TAKE** and select memory block 2. The **Last Cue** command scrolls through the cue points of block 2.
  - To go through cue points of another block, select that block first then press **Last Cue**.
- On OSD, the first information, displayed in white, refers to the cue points on the playing block while the second information, displayed in red, refers to the recording block.

18.5.5 For-A VFC-7000 Camera

Application Start

At application start, the recording starts on the first memory block.

Configuration Parameter Values

The **PGMSpeed** parameter value 1000 is not available.

Key Behavior

- **TAKE**: this key is operational in ARM mode.
- **RECORD**: the remote beeps if the CAM key refers to an empty block.
- **RECORD**: pressing this key while the current block is recording clears all memory blocks and starts recording on the first one.
- **CLEAR**: press this key to delete the current memory block data.

Cue points management

- NOTE: the cue points are only operational when all memory blocks have been recorded once.
- When a new ARM/REC command is issued on a block, all its cue points are cleared.
- If the **Last Cue** command cannot access the desired TC-pre-roll, the player remains on the current cue point.
- If the **Last Cue** command refers to a TC that does not exist anymore, the key beeps but the OSD still displays the number of the cue that you wanted to go to.
- Cue points can be marked across several blocks but the recall is limited to the currently selected block.

  Example:

  - While recording on memory block 1, mark cue points 1, 2, and 3 on memory block 1.
  - Press **TAKE** to start recording on block 2 and mark cue points 1, 2, and 3.
  - Press **TAKE** and select memory block 2. The **Last Cue** command scrolls through the cue points of block 2.
  - To go through cue points of another block, select that block first then press **Last Cue**.
- On OSD, the first information, displayed in white, refers to the cue points on the playing block while the second information, displayed in red, refers to the recording block.

19. Sony, XtenDD35, Odetics & VDCP Protocols

19.1 Protocol Overview

These protocols allow the server to be controlled by external devices.

Sony BVW75 Protocol

This protocol allows the server to be seen as a VTR by the controlling device. On a playback channel, all usual transport commands (play, PlayVar, pause, goto timecode, pause, stop, etc…) are supported. On a record channel, only Rec and Stop commands are supported.

This protocol is the simplest one but does not support clip management. It should be used when the controlling device does not support the XtenDD35, Odetics or Louth VDCP protocols (ex: edit controllers, NLE applications, some video switchers, VTR controllers, etc.)

XtenDD35 Protocol

This protocol is based on the Sony BVW75 protocol for all standard transport commands. It has extended commands so that it supports clip management: using this protocol, the controlling device can create, name, recall and delete clips.

This protocol can be used with Thomson/GVG XtenDD range of switchers, and with DNF ST300-EVS and 4040CL-EVS controllers.

Odetics Protocol

This protocol is based on the Sony BVW75 protocol for all standard transport commands. It has extended commands so that it supports clip and playlist management: using this protocol, the controlling device can create, name, recall and delete clips, but it can also manage playlists.

This protocol can be used with many different control devices and automations software, including DNF ST300 and 4040CL controllers.

Non standard commands in Sony, XtenDD35 and Odetics protocols on the play channel of an EVS server:

REC: when a REC command is sent to a play channel, this channel will return in E2E mode on its default record train. If the default record channel associated to that player is currently stopped, it will jump to the last recorded picture and pause.

EJECT: if the play channel is not yet in E2E mode when the command is sent, it will return to E2E mode on its default record train (similar to receiving a REC command). If the play channel is already in E2E mode, it will switch to the next record channel available (A→B→C→…→A→…). This is for example useful with a BVE edit controller to allow the editor to select the record train he wants to work with.

Louth VDCP Protocol

This protocol is a more complex protocol mainly used by automation systems but also by Sony switchers. It is not based on the Sony BVW75, and can handle clips as well as playlists.

IPDP Protocol

For more information on how the IP Director application controls the server, refer to the IP Director Technical Reference manual and User manual.

Glossary

HANC LTC	Horizontal Ancillary timecode LTC as defined in the XMPTE 259M and RP188 standards.
HANC VITC	Horizontal Ancillary timecode VITC as defined in the XMPTE 259M and RP188 standards.
LTC	Longitudinal (or Linear) timecode (LTC) is a timing signal that is part of an audio tape recording. It is recorded on a track that runs lengthwise along the tape, which is why it is called longitudinal. It can only be read if the tape is playing.
LTC table	Timecode jump table in which the jumps in LTC timecodes are stored.
OSD	On-Screen Display. Information displayed on the output monitor.
Protected clip	Clip that has been created on an EVS server and that cannot be manually deleted by users. Such clips are clips: • stored on server pages defined as protected pages in the parameters, • stored on pages dedicated to a protocol, • inserted in a playlist or timeline, In this case, the user can however force the deletion. • being on-air, In this case, the clip is rather 'locked', not really 'protected'.
Protect IN point	Position, i.e. timecode, which represents the first image of the protected video material for a clip, i.e. the first image before the IN guardband.
Protect OUT point	Position, i.e. timecode, which represents the last image of the protected video material for a clip, i.e. the last image after the OUT guardband.
Short IN point	Position, i.e. timecode, which represents the first image of a clip. This is also called IN point in this user manual.
Short OUT point	Position, i.e. timecode, which represents the last image of a clip. This is also called OUT point in this user manual.
Unprotected clip	Clips that users can manually delete via a Delete action. These clips are however write-protected: they

(or non-protected clip)	will never be automatically deleted by the record train.
VITC	Vertical interval timecode (VITC) is a timing signal that is part of a video recording. It is recorded in the vertical blanking intervals between successive picture frames, hence the "vertical interval."
VITC table	Timecode jump table in which the user defined timecode type is stored. This will usually be the VITC in SD and HANC VITC in HD but could be another timecode type.

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